

Figure 1

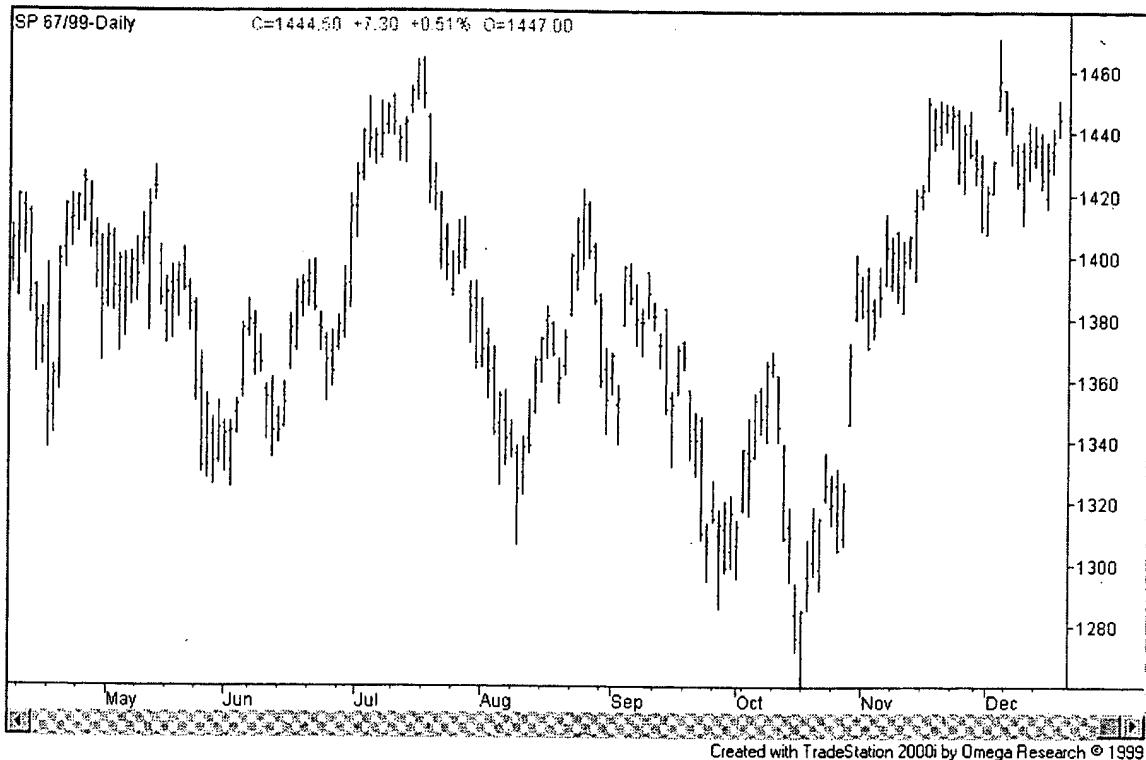


Figure 1 S&P 500 daily futures bar chart.

Figure 2

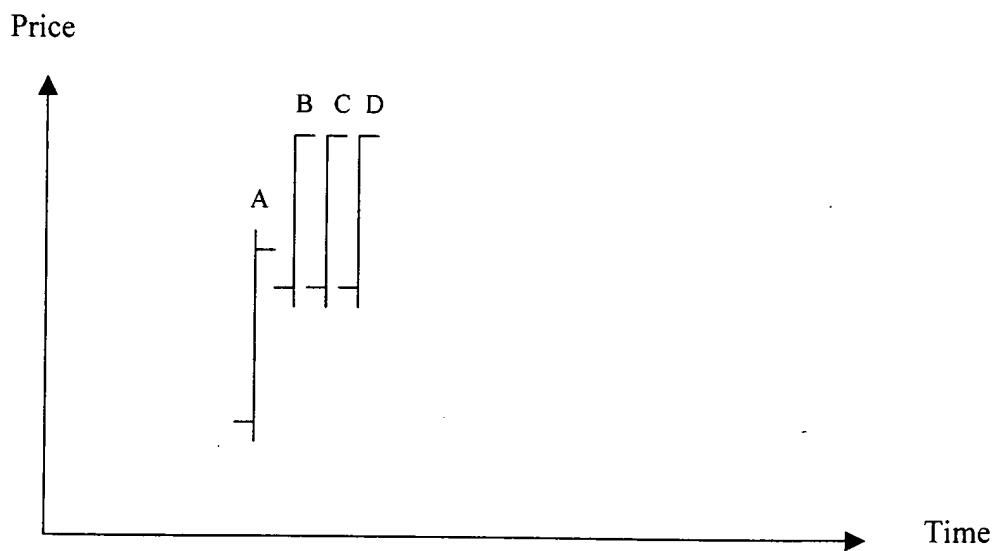


Figure 2 Four daily price bars.

Figure 3

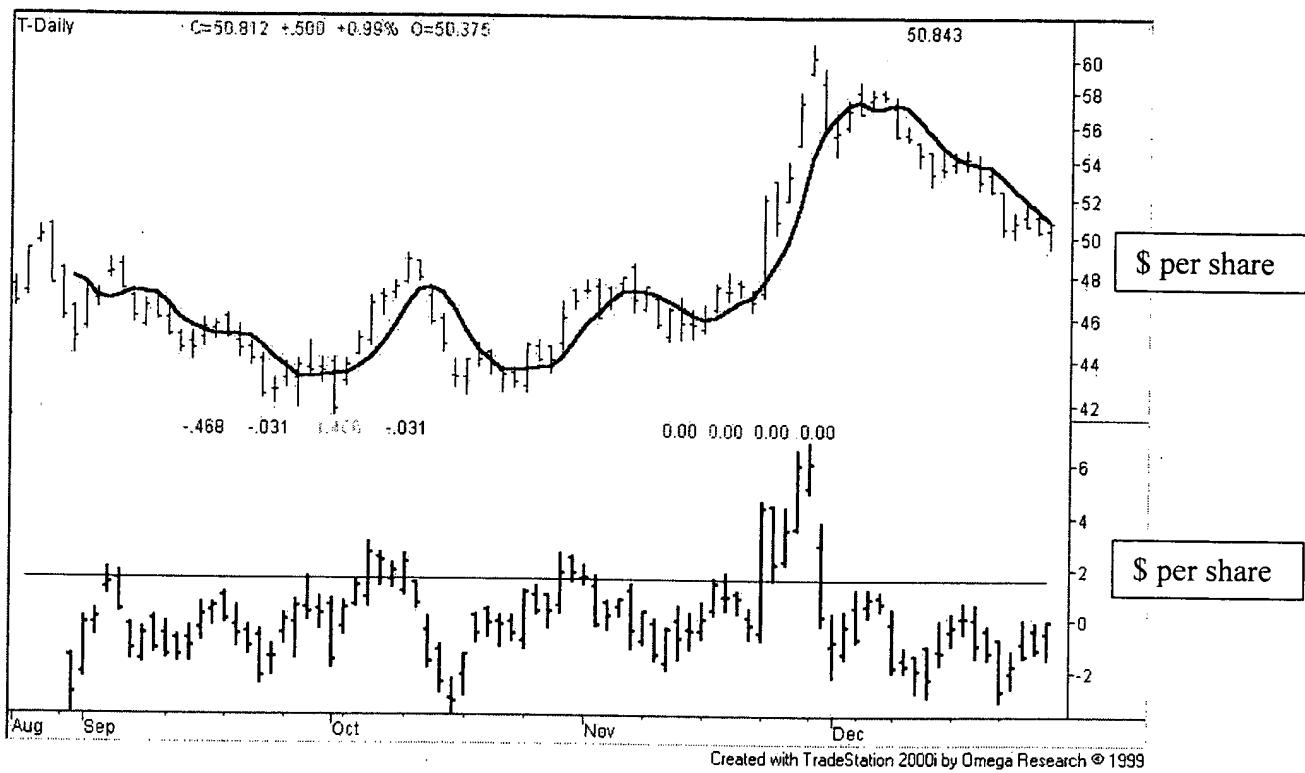


Figure 3 Daily AT&T price chart (top) and relative price chart (bottom).

Figure 4

	1	2	3	4	5	6	7	8	9	10
Date	Open	High	Low	Close	Floating Axis	Relative Open	Relative High	Relative Low	Relative Close	
990831	46.437	46.500	44.250	45.000	47.894	-1.457	-1.394	-3.644	-2.894	
990901	45.500	47.625	45.375	47.375	47.575	-2.075	0.050	-2.200	-0.200	
990902	46.750	47.250	46.375	47.000	46.950	-0.200	0.300	-0.575	0.050	
990903	48.000	48.750	47.812	48.125	46.800	1.200	1.950	1.012	1.325	
990907	48.500	48.812	47.312	47.312	47.006	1.494	1.806	0.306	0.306	
990908	46.937	47.000	45.687	46.000	47.200	-0.263	-0.200	-1.513	-1.200	
990909	45.562	46.750	45.500	46.500	47.125	-1.563	-0.375	-1.625	-0.625	
990910	47.000	47.125	45.812	45.875	47.056	-0.056	0.069	-1.244	-1.181	
990913	45.937	46.375	45.062	45.125	46.544	-0.607	-0.169	-1.482	-1.419	
990914	45.125	45.250	44.312	44.500	45.887	-0.762	-0.637	-1.575	-1.387	
990915	44.750	45.250	43.937	44.500	45.537	-0.787	-0.287	-1.600	-1.037	
990916	45.000	45.937	44.562	45.500	45.362	-0.362	0.575	-0.800	0.138	
990917	45.437	45.750	44.937	45.625	45.137	0.300	0.613	-0.200	0.488	
990920	46.000	46.125	45.000	45.062	45.106	0.894	1.019	-0.106	-0.044	
990921	44.875	45.625	44.125	44.500	45.125	-0.250	0.500	-1.000	-0.625	
990922	44.562	44.812	43.750	44.000	45.062	-0.500	-0.250	-1.312	-1.062	
990923	44.000	44.250	42.250	42.437	44.662	-0.662	-0.412	-2.412	-2.225	
990924	42.625	43.125	42.000	42.625	44.106	-1.481	-0.981	-2.106	-1.481	
990927	43.125	43.875	42.750	43.625	43.656	-0.531	0.219	-0.906	-0.031	
990928	43.125	44.000	41.812	43.750	43.262	-0.137	0.738	-1.450	0.488	
990929	43.625	44.875	43.250	43.500	43.219	0.406	1.656	0.031	0.281	
990930	43.625	44.125	42.937	43.500	43.275	0.350	0.850	-0.338	0.225	

Figure 4 Example calculations for generating the AT&T relative chart (figure 3).

Figure 5

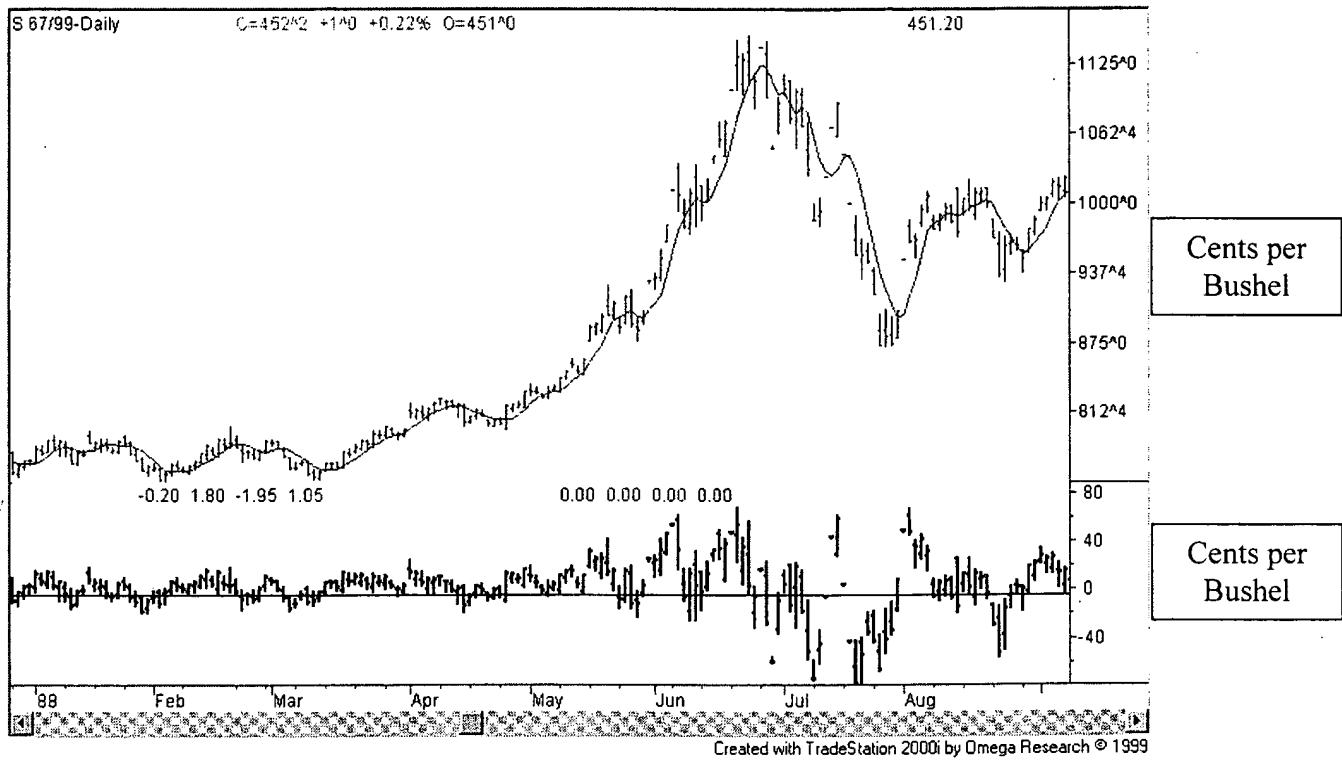


Figure 5 Daily Soybeans price chart (top) and relative price chart (bottom).

Figure 6

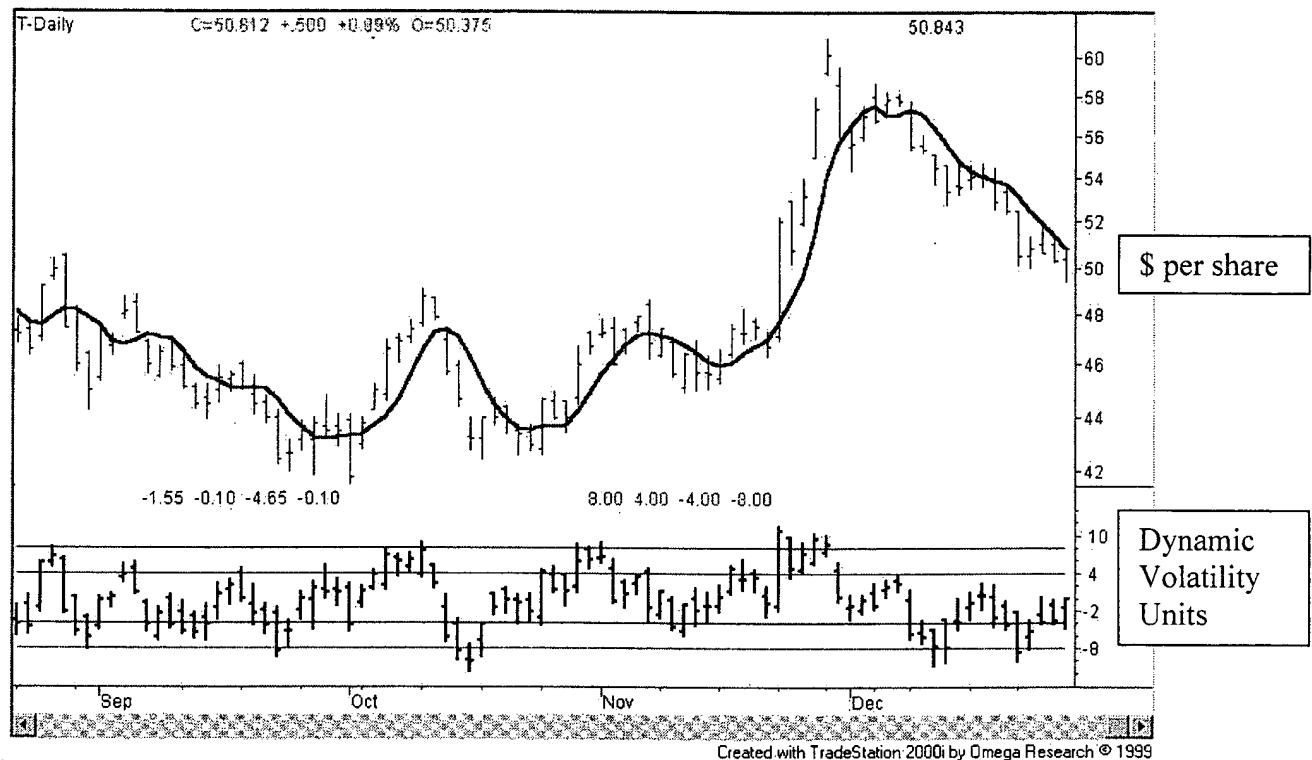


Figure 6 Daily AT&T price chart (top) and Value Chart™ (bottom).

Figure 7

	1	2	3	4	5	6	7	8	9	10	11
Date	Open	High	Low	Close	Floating Axis	Volatility Unit	Value Open	Value High	Value Low	Value Close	
990831	46.437	46.500	44.250	45.000	47.894	0.455	-3.202	-3.063	-8.009	-6.360	
990901	45.500	47.625	45.375	47.375	47.575	0.445	-4.663	0.113	-4.944	-0.449	
990902	46.750	47.250	46.375	47.000	46.950	0.445	-0.449	0.674	-1.292	0.113	
990903	48.000	48.750	47.812	48.125	46.800	0.368	3.266	5.307	2.754	3.606	
990907	48.500	48.812	47.312	47.312	47.006	0.325	4.597	5.557	0.941	0.941	
990908	46.937	47.000	45.687	46.000	47.200	0.288	-0.914	-0.695	-5.262	-4.173	
990909	45.562	46.750	45.500	46.500	47.125	0.243	-6.444	-1.545	-6.700	-2.576	
990910	47.000	47.125	45.812	45.875	47.056	0.260	-0.215	0.265	-4.784	-4.542	
990913	45.937	46.375	45.062	45.125	46.544	0.268	-2.267	-0.630	-5.537	-5.302	
990914	45.125	45.250	44.312	44.500	45.887	0.245	-3.110	-2.600	-6.428	-5.661	
990915	44.750	45.250	43.937	44.500	45.537	0.245	-3.212	-1.172	-6.530	-4.233	
990916	45.000	45.937	44.562	45.500	45.362	0.250	-1.448	2.299	-3.200	0.551	
990917	45.437	45.750	44.937	45.625	45.137	0.230	1.303	2.663	-0.870	2.120	
990920	46.000	46.125	45.000	45.062	45.106	0.223	4.017	4.579	-0.476	-0.198	
990921	44.875	45.625	44.125	44.500	45.125	0.245	-1.019	2.041	-4.080	-2.550	
990922	44.562	44.812	43.750	44.000	45.062	0.235	-2.129	-1.065	-5.584	-4.520	
990923	44.000	44.250	42.250	42.437	44.662	0.260	-2.548	-1.586	-9.279	-8.559	
990924	42.625	43.125	42.000	42.625	44.106	0.273	-5.436	-3.601	-7.730	-5.436	
990927	43.125	43.875	42.750	43.625	43.656	0.273	-1.950	0.803	-3.326	-0.115	
990928	43.125	44.000	41.812	43.750	43.262	0.300	-0.458	2.459	-4.835	1.625	
990929	43.625	44.875	43.250	43.500	43.219	0.323	1.260	5.136	0.097	0.872	
990930	43.625	44.125	42.937	43.500	43.275	0.290	1.207	2.931	-1.165	0.776	

Figure 7 Example calculations for generating the AT&T Value Chart™ (figure 6).

Figure 8

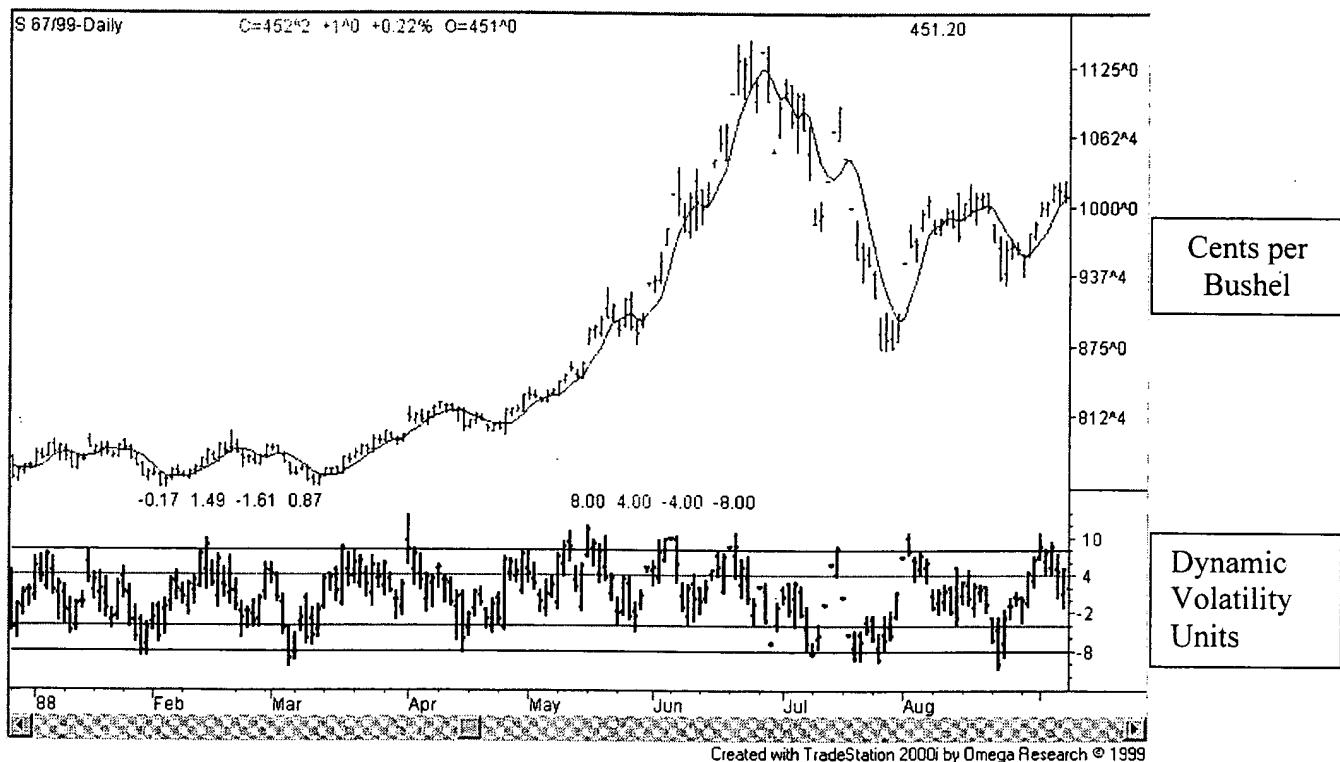


Figure 8 Daily Soybeans bar chart above a Daily Soybeans Value Chart™.

Figure 9

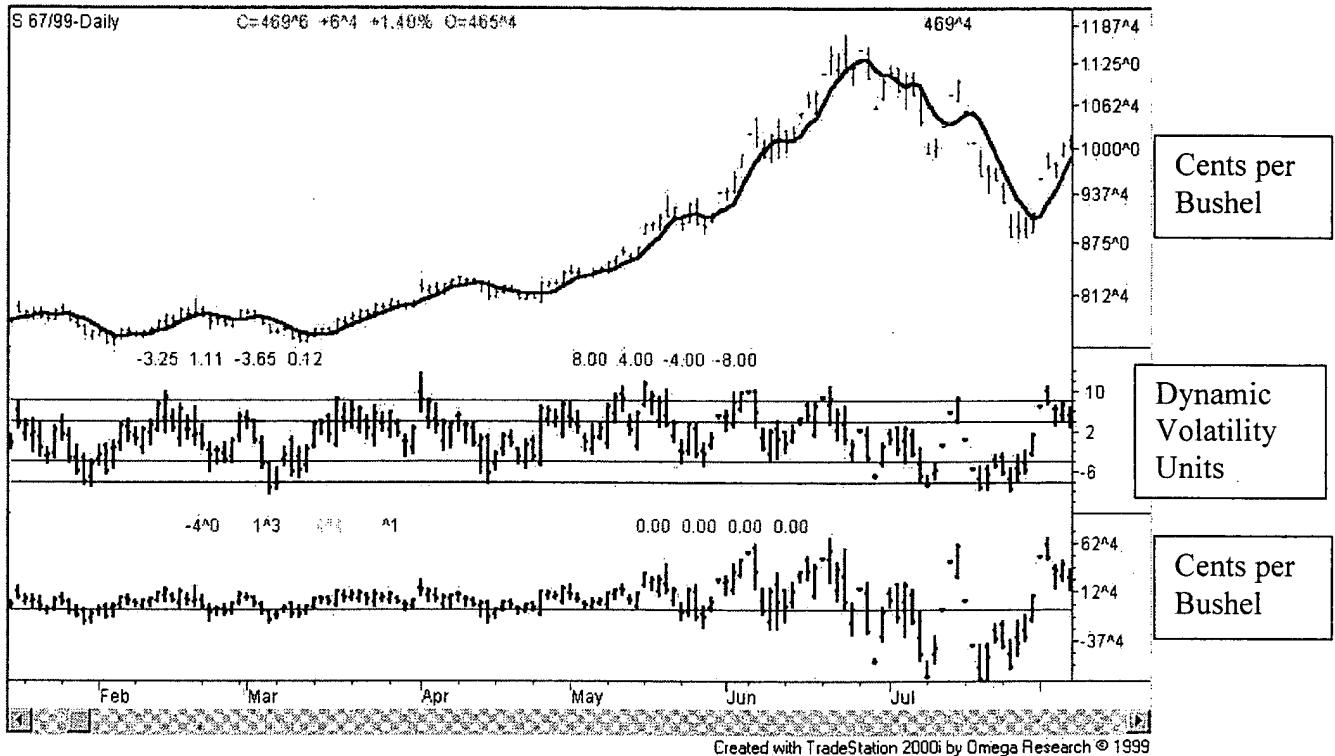


Figure 9 Soybeans bar chart over a Value Chart™ (middle) and a relative chart (bottom).

Figure 10

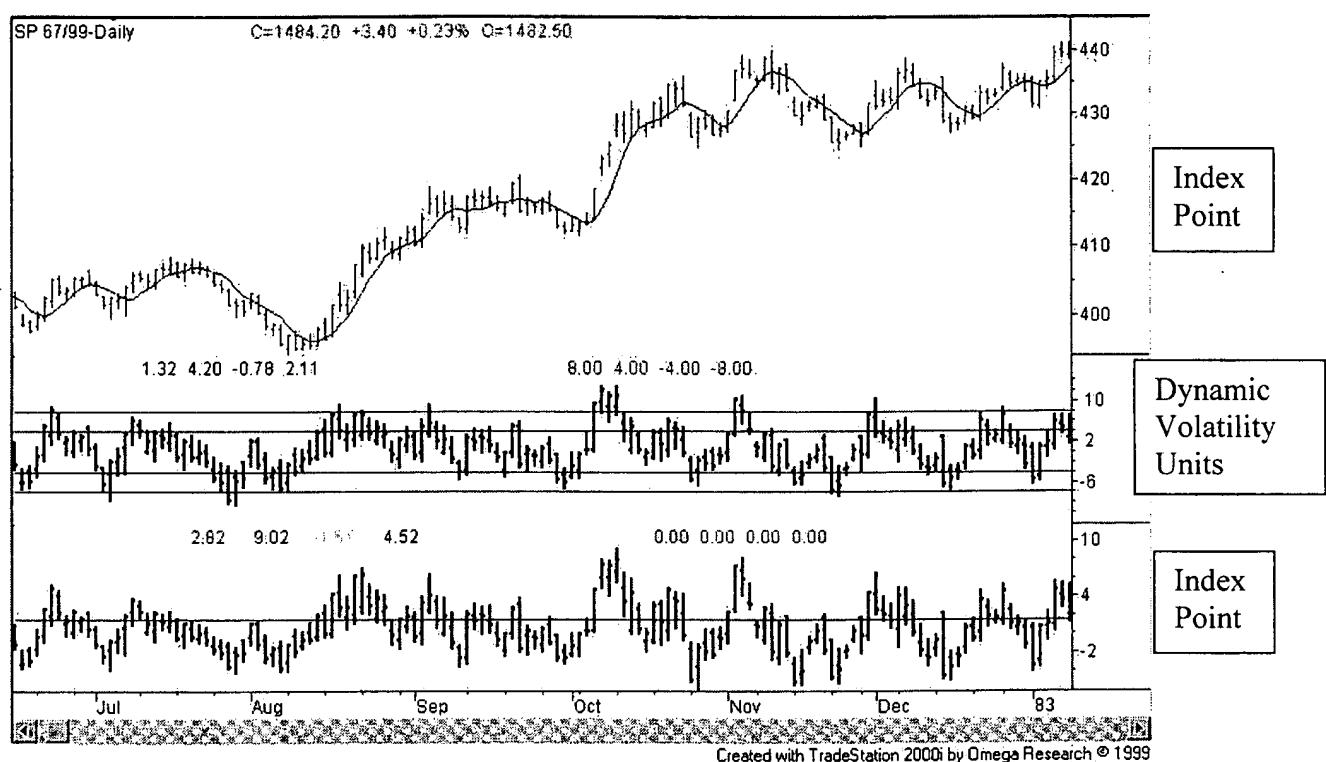


Figure 10 S&P 500 bar chart in 1982 over a Value Chart™ and a relative chart.

Figure 11

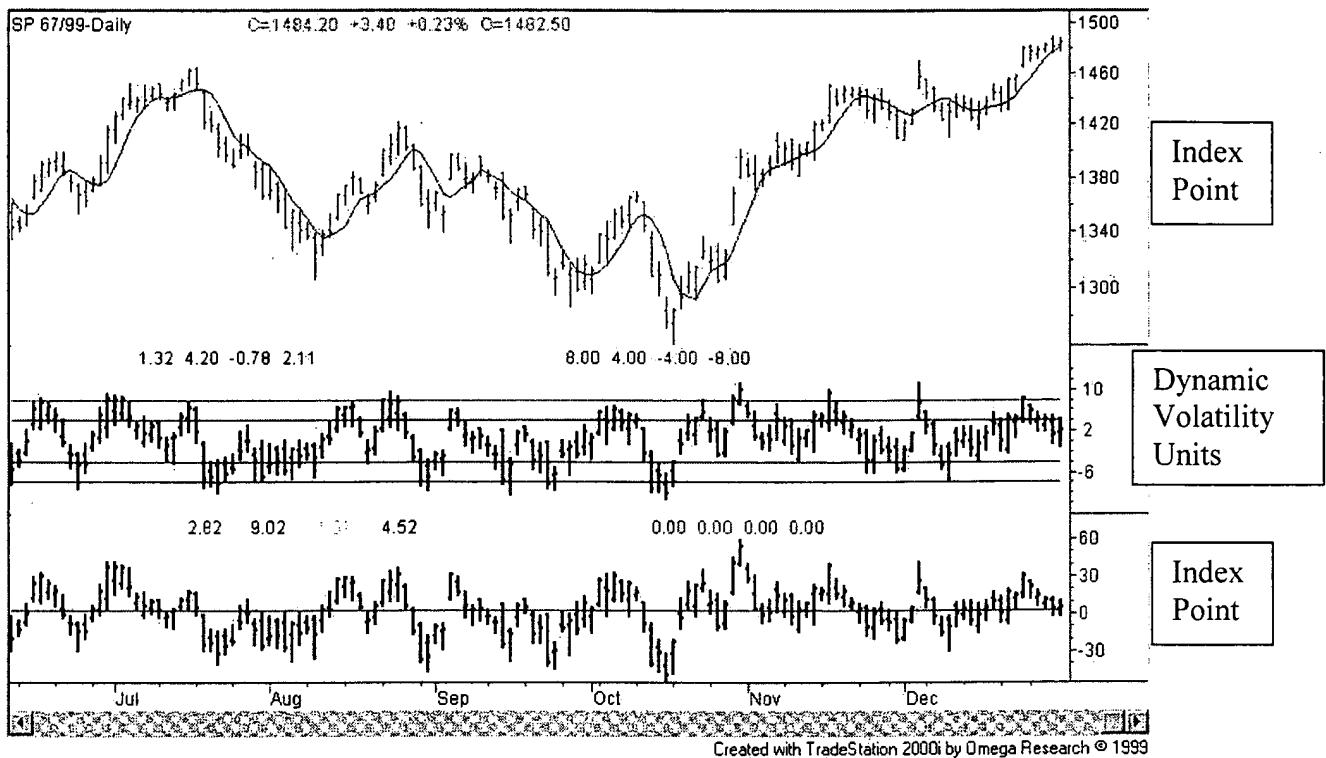


Figure 11 S&P 500 bar chart in 1999 over a Value Chart™ and a relative chart.

Figures 12(a)(b)

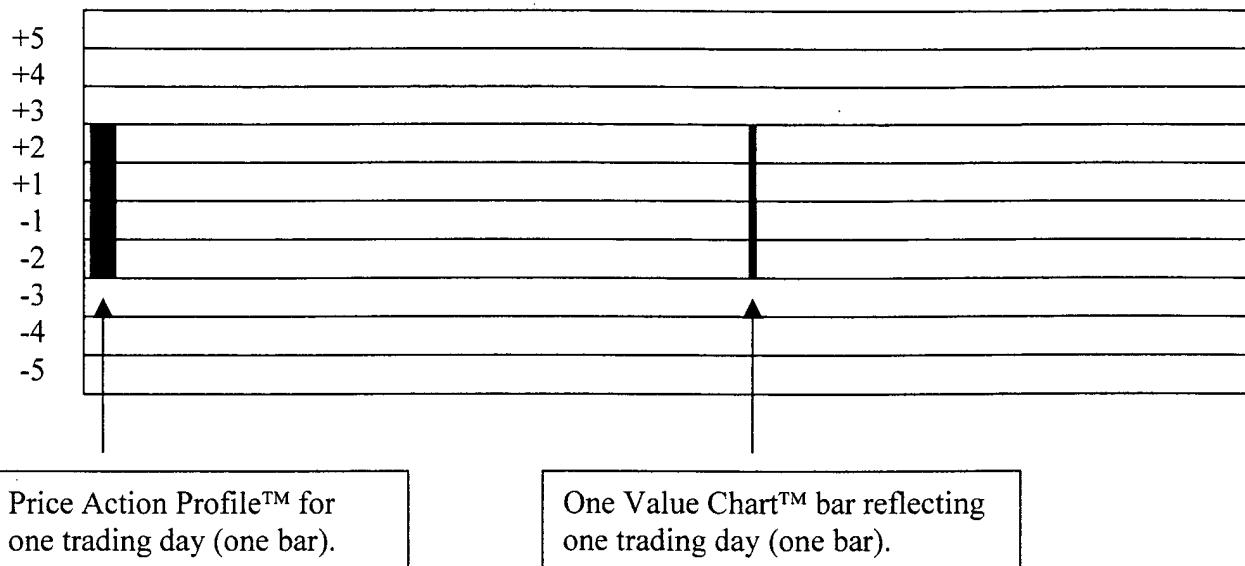


Figure 12a Development of a Price Action Profile™.

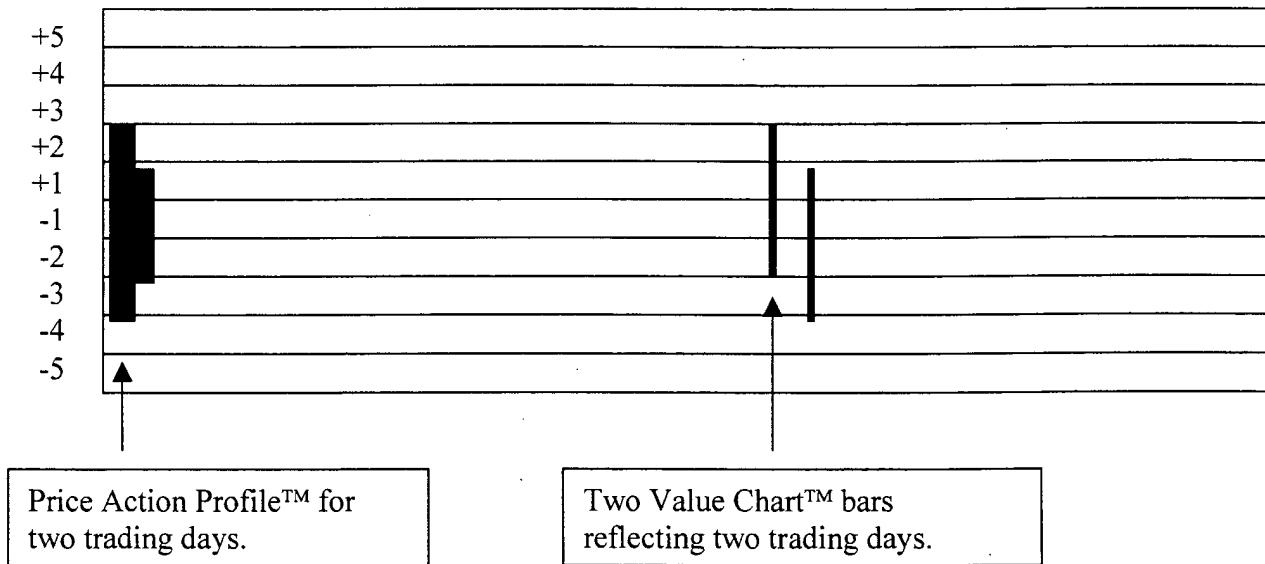


Figure 12b Development of a Price Action Profile™.

Figures 12(c)(d)

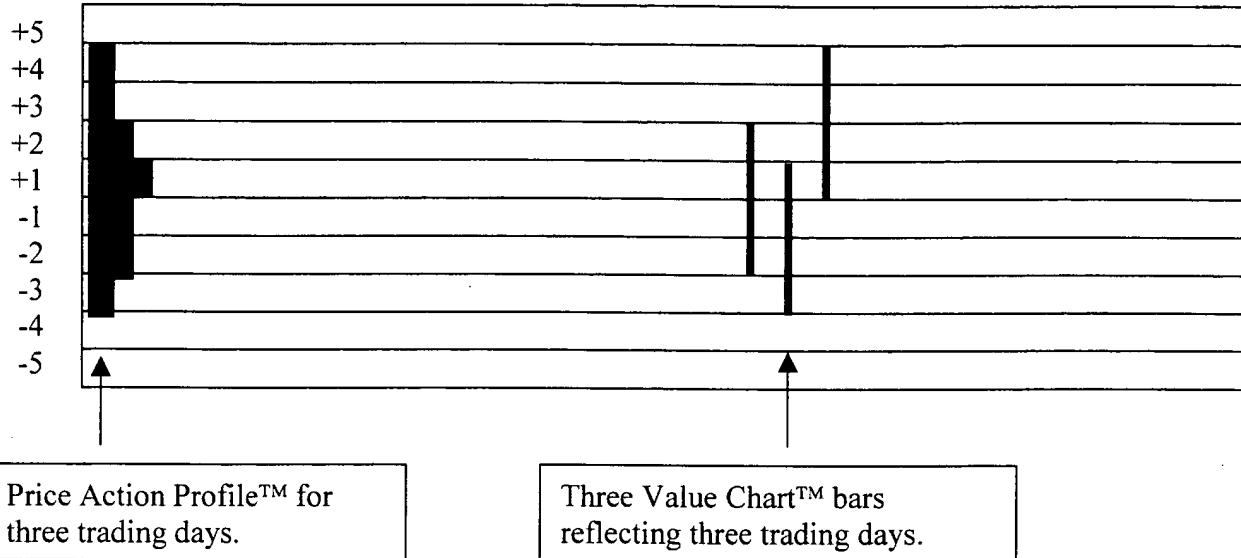


Figure 12c Development of a Price Action Profile™.

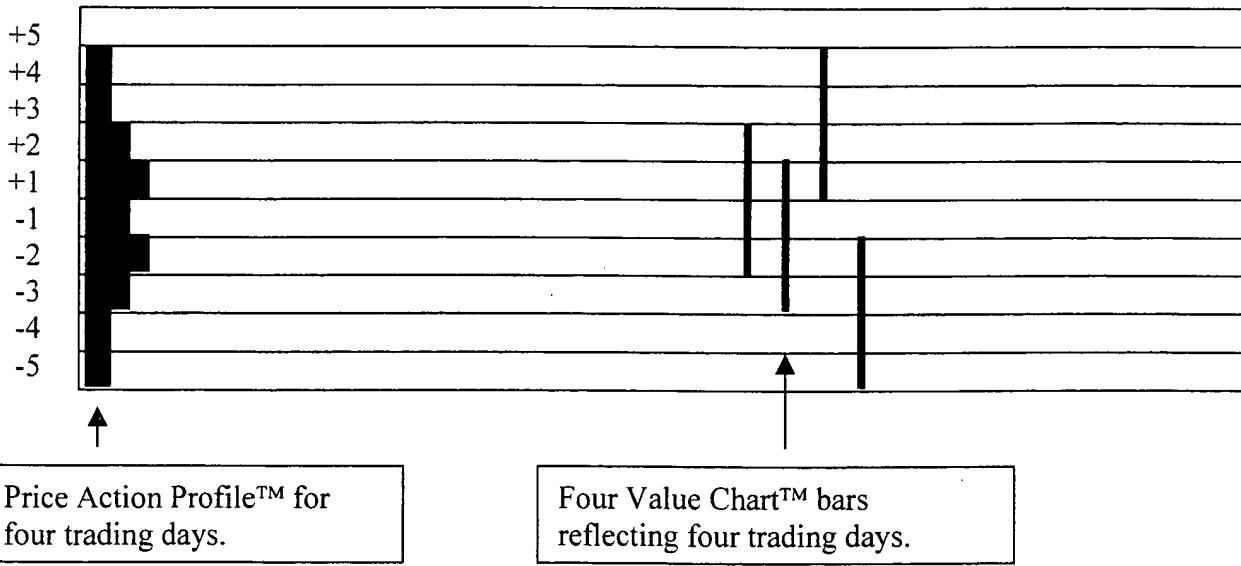


Figure 12d Development of a Price Action Profile™.

Figures 13(a)(b)

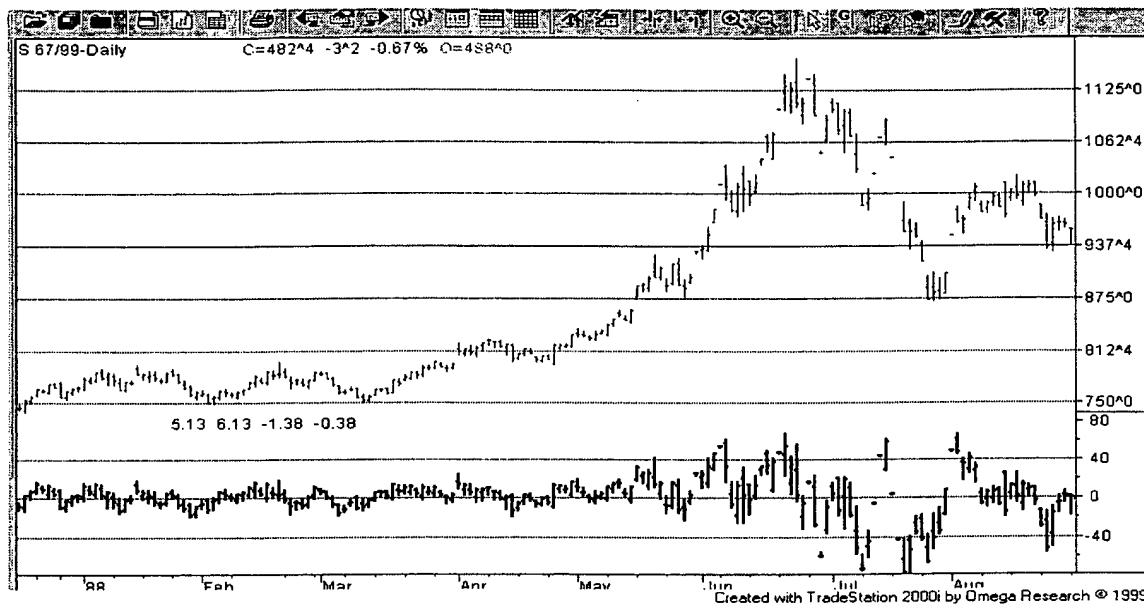


Figure 13a Daily Soybeans bar chart above a Daily Soybeans Relative Chart.

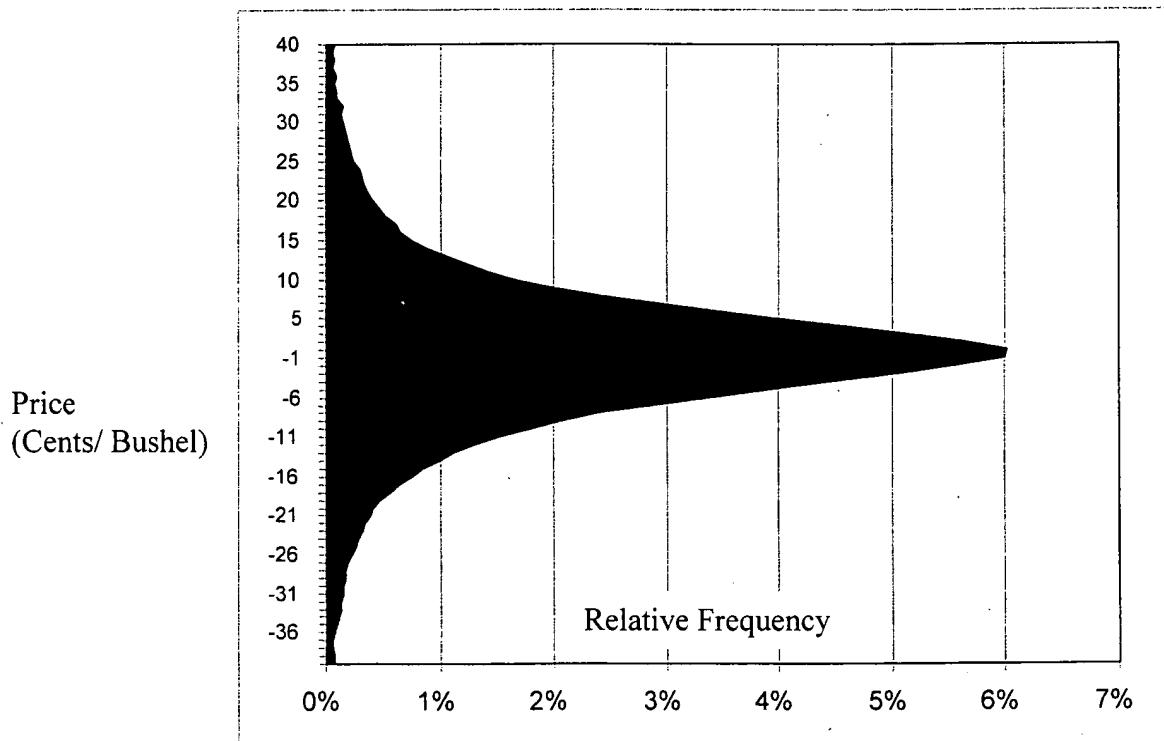


Figure 13b Frequency Histogram of relative daily Soybeans chart.

Figures 14(a)(b)

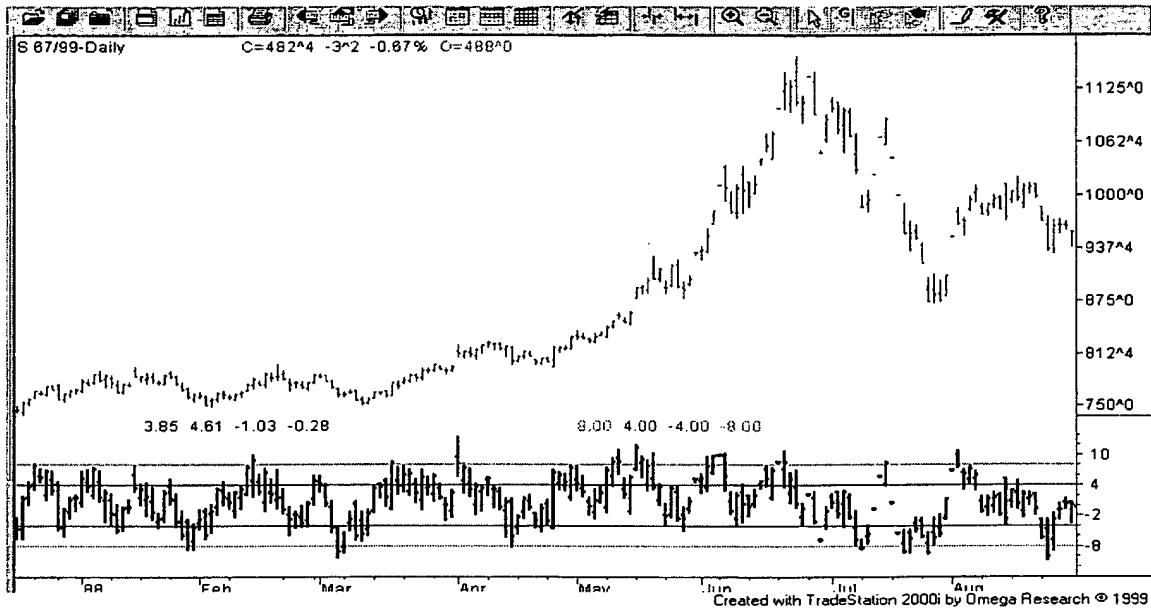


Figure 14a Daily Soybeans bar chart above a Daily Soybeans Value Chart™.

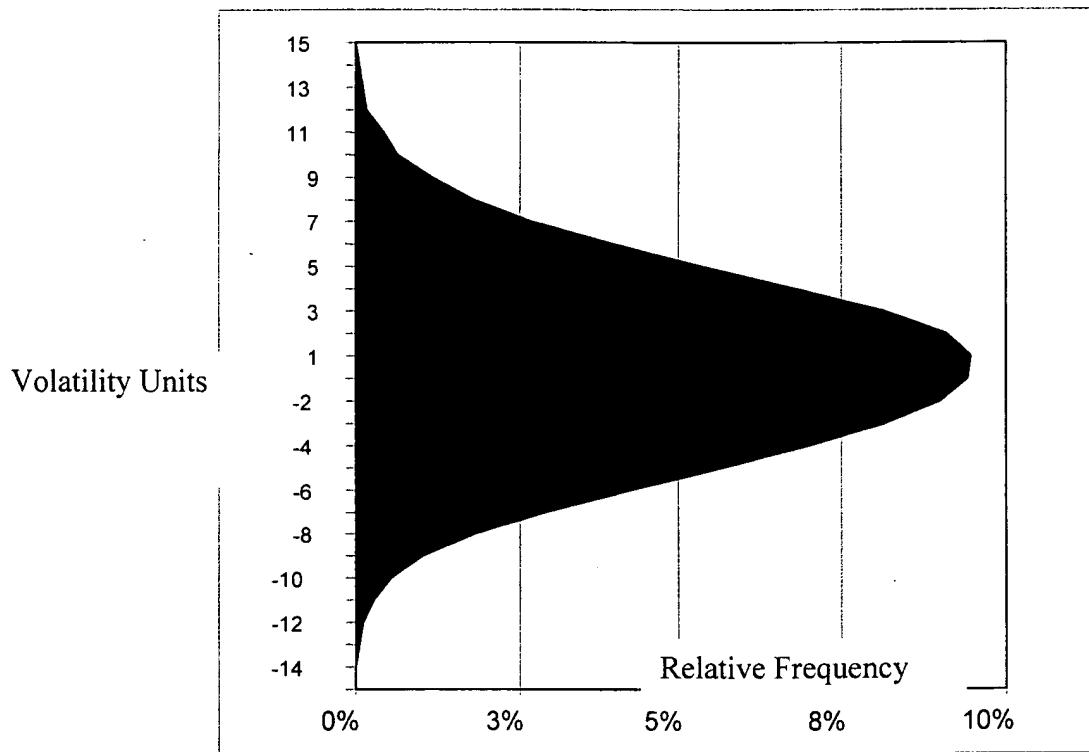


Figure 14b Price Action Profile™ generated from the daily Soybeans Value Chart™.

Figure 15

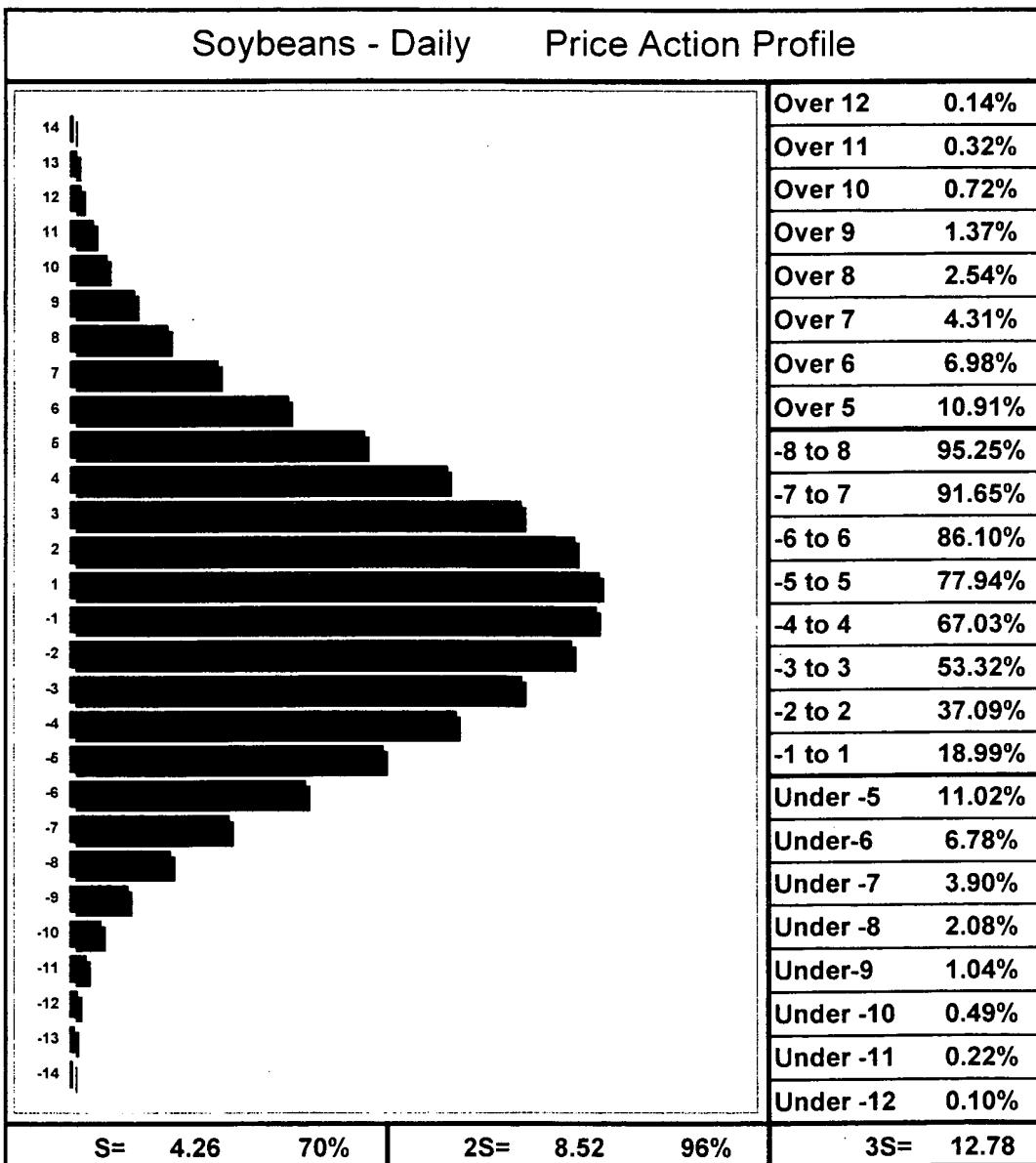


Figure 15 Price Action Profile™ from a daily Soybean Value Chart™.

Figure 16

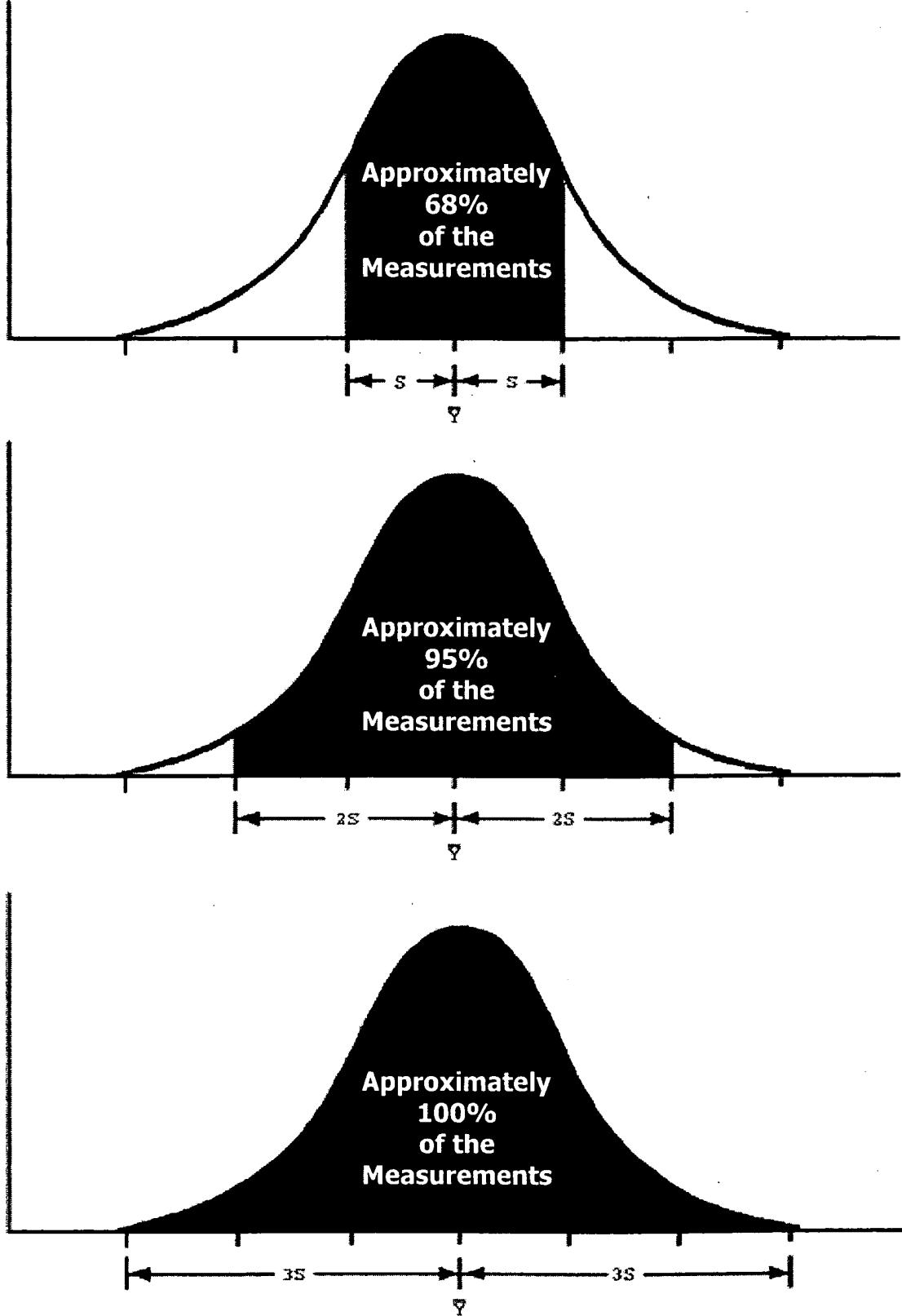


Figure 16 The Empirical Rule describing normal (mound-shaped) Bell Curves.

Figure 17

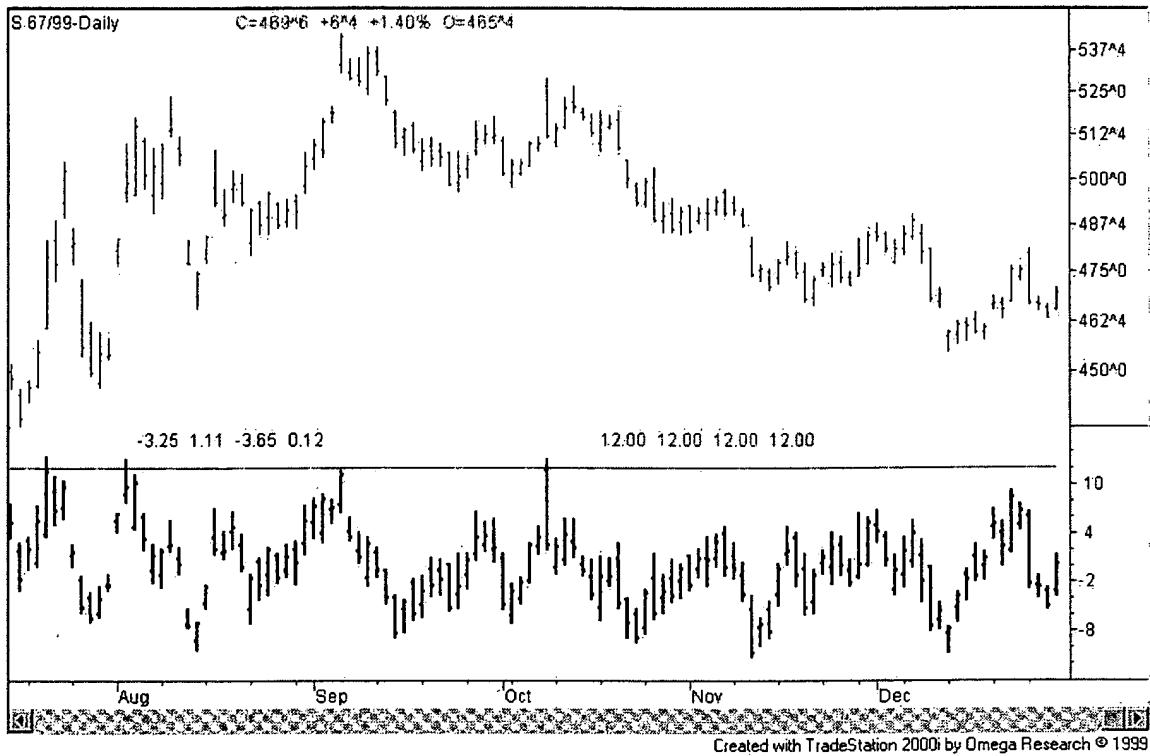


Figure 17 Daily Soybeans Value Chart™ with a +12 Value Chart™ line.

Figure 18

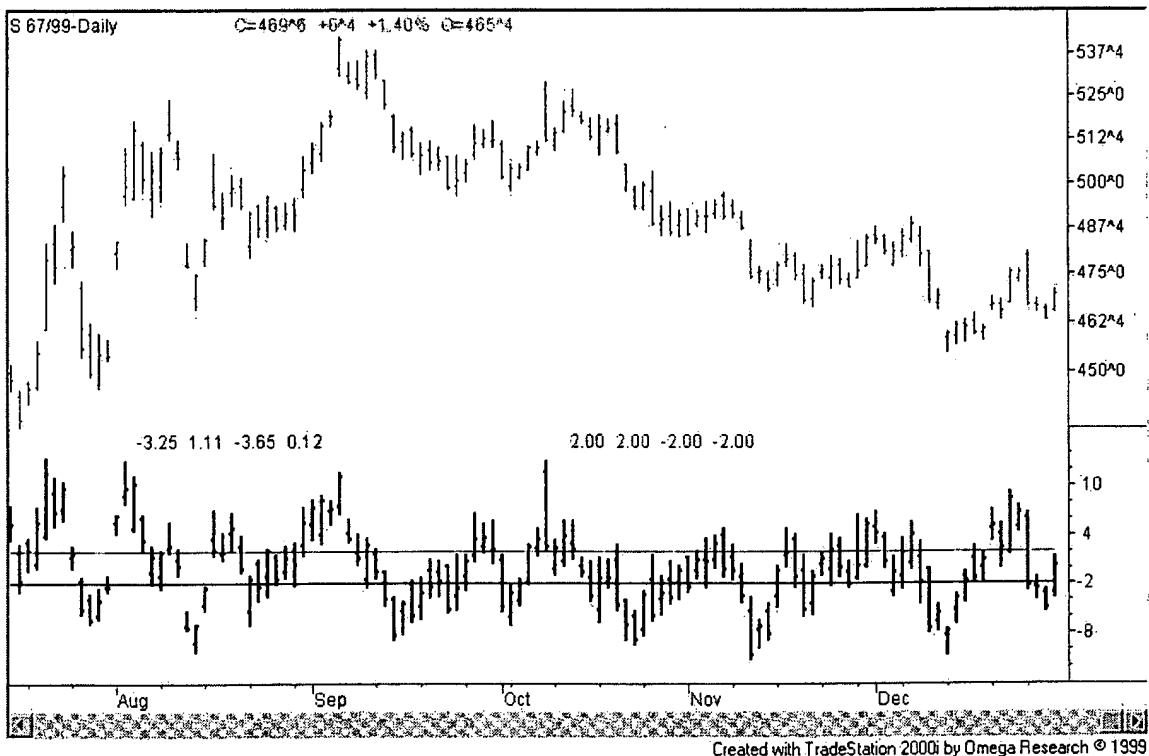


Figure 18 Daily Soybeans Value Chart™ with ± 2 Value Chart™ lines.

Figure 19

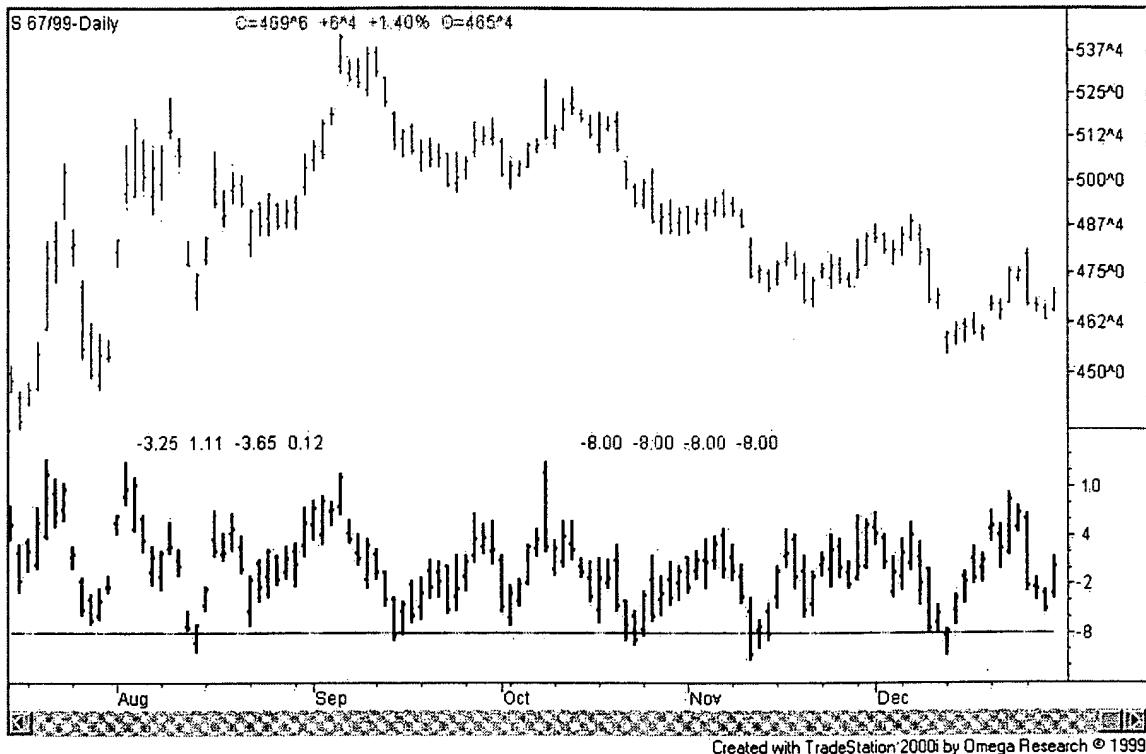


Figure 19 Daily Soybeans Value Chart™ with a -8 Value Chart™ line.

Figure 20

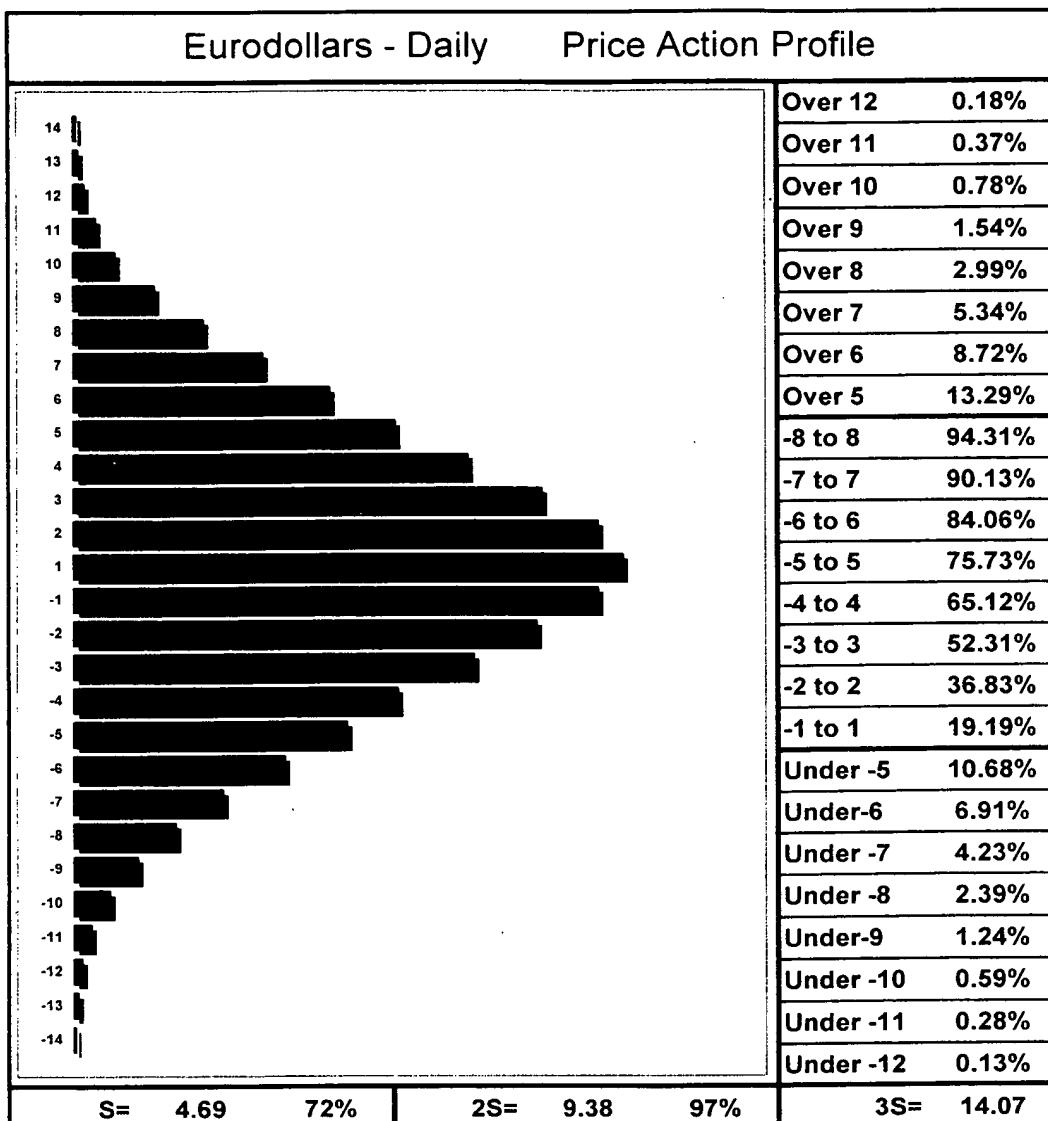


Figure 20 Price Action Profile™ from a daily Eurodollars Value Chart™.

Note that ± 1 standard deviation calculated from the Eurodollars Value Chart™ (see bottom of figure 20) is equal to ± 4.69 and contains 72% of the daily Eurodollars price bars. Furthermore, ± 2 standard deviations calculated from the Eurodollars Value Chart™ (see bottom of figure 20) is equal to ± 9.38 and contains 97% of the daily Eurodollars price bars. Although not displayed in the figure above, ± 3 standard deviations calculated from the Eurodollars Value Chart™ is equal to ± 14.07 and contains 99% of the daily Eurodollars price bars. The Eurodollars Price Action Profile™ displayed in figure 20 meets the requirement of the Empirical Rule displayed in figure 16 and is therefore considered a normal bell curve, which is statistically significant. Given this fact, the Eurodollars Price Action Profile™ allows us to make inferences about future price behavior.

Figure 21

	S	ED	CC	CL	GC	LH	US	SP	SF	AXP	GM	HWP
Over +12	0.1%	0.2%	0.1%	0.2%	0.2%	0.1%	0.1%	0.0%	0.3%	0.2%	0.2%	0.2%
Over +11	0.3%	0.4%	0.4%	0.4%	0.4%	0.2%	0.2%	0.1%	0.7%	0.5%	0.4%	0.4%
Over +10	0.7%	0.8%	0.9%	0.7%	0.8%	0.5%	0.6%	0.3%	1.2%	1.0%	0.8%	0.9%
Over +9	1.4%	1.5%	1.8%	1.3%	1.5%	1.0%	1.2%	0.8%	2.2%	1.8%	1.6%	1.6%
Over +8	2.5%	3.0%	3.3%	2.4%	2.6%	2.1%	2.3%	1.7%	3.6%	3.1%	3.0%	2.8%
Over +7	4.3%	5.3%	5.4%	4.3%	4.2%	3.9%	4.2%	3.5%	5.7%	5.2%	5.0%	4.9%
Over +6	7.0%	8.7%	8.3%	7.4%	6.7%	6.9%	7.1%	6.5%	8.7%	8.2%	8.0%	8.1%
Over +5	10.9%	13.3%	12.1%	11.9%	10.2%	11.3%	11.3%	11.2%	12.7%	12.5%	12.2%	12.5%
-8 to +8	95.2%	94.3%	93.8%	94.7%	94.2%	95.7%	95.5%	96.8%	92.7%	94.1%	94.5%	94.8%
-7 to +7	91.7%	90.1%	89.5%	91.0%	90.5%	92.3%	92.0%	93.7%	88.2%	90.3%	90.5%	91.1%
-6 to +6	86.1%	84.1%	83.5%	85.1%	85.2%	86.9%	86.2%	88.6%	81.9%	84.8%	84.5%	85.3%
-5 to +5	77.9%	75.7%	75.2%	76.7%	77.7%	78.9%	77.9%	80.7%	73.3%	76.9%	76.0%	77.1%
-4 to +4	67.0%	65.1%	64.4%	65.8%	67.7%	68.0%	66.6%	69.7%	62.5%	66.4%	64.9%	66.4%
-3 to +3	53.3%	52.3%	51.1%	52.3%	54.9%	54.3%	52.7%	55.4%	49.6%	53.2%	51.2%	52.8%
-2 to +2	37.1%	36.8%	35.6%	36.4%	39.0%	38.0%	36.4%	38.5%	34.6%	37.3%	35.3%	36.7%
-1 to +1	19.0%	19.2%	18.2%	18.7%	20.4%	19.6%	18.5%	19.7%	17.7%	19.3%	17.9%	19.0%
Under -5	11.0%	10.7%	12.5%	11.3%	11.9%	9.8%	10.7%	8.1%	13.8%	10.4%	11.6%	10.3%
Under -6	6.8%	6.9%	8.1%	7.4%	8.0%	6.2%	6.6%	4.9%	9.3%	6.7%	7.4%	6.5%
Under -7	3.9%	4.2%	4.9%	4.7%	5.2%	3.8%	3.7%	2.7%	5.9%	4.2%	4.4%	3.9%
Under -8	2.1%	2.4%	2.8%	2.8%	3.2%	2.2%	2.0%	1.4%	3.6%	2.5%	2.4%	2.2%
Under -9	1.0%	1.2%	1.4%	1.6%	1.9%	1.2%	1.0%	0.7%	2.0%	1.4%	1.2%	1.2%
Under -10	0.5%	0.6%	0.7%	0.8%	1.0%	0.6%	0.4%	0.3%	1.1%	0.7%	0.6%	0.6%
Under -11	0.2%	0.3%	0.2%	0.4%	0.6%	0.3%	0.2%	0.2%	0.5%	0.4%	0.3%	0.3%
Under -12	0.1%	0.1%	0.1%	0.2%	0.3%	0.1%	0.1%	0.1%	0.2%	0.2%	0.1%	0.2%

Figure 21 Price Action Profile™ analysis generated from several different markets.

Figure 22

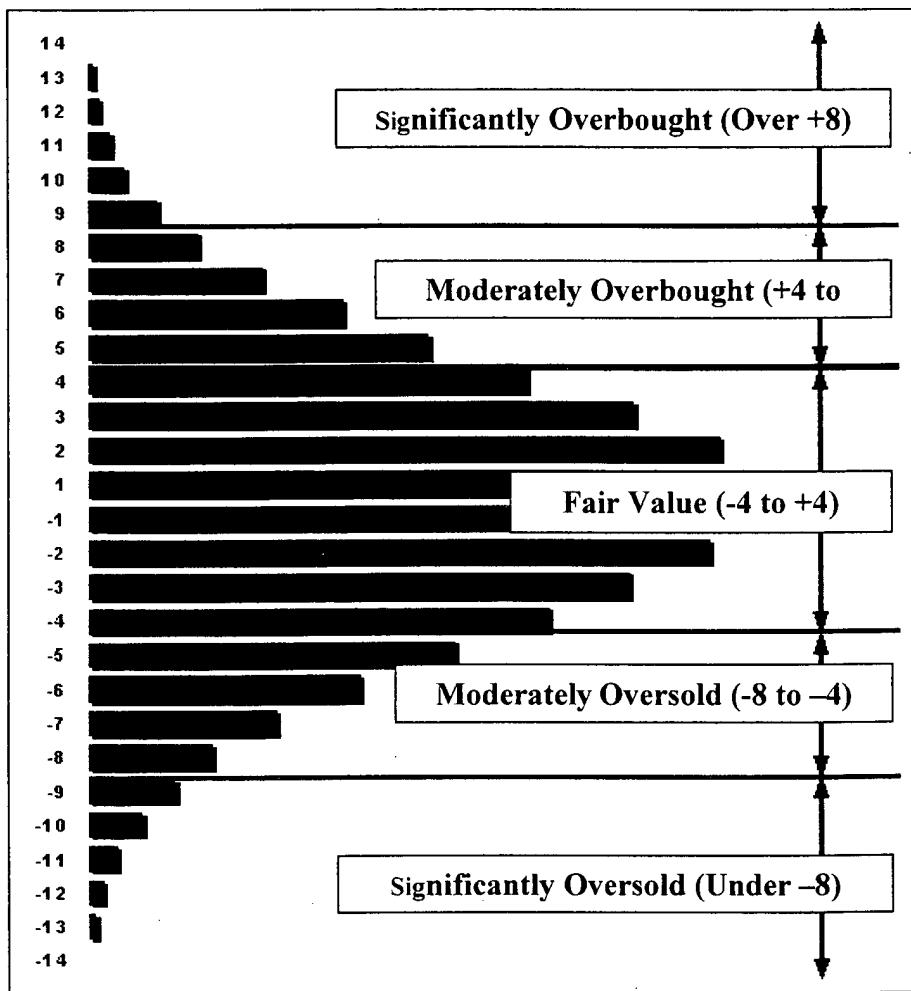


Figure 22 Price Action Profile™ relative value convention.

Figures 23(a)(b)

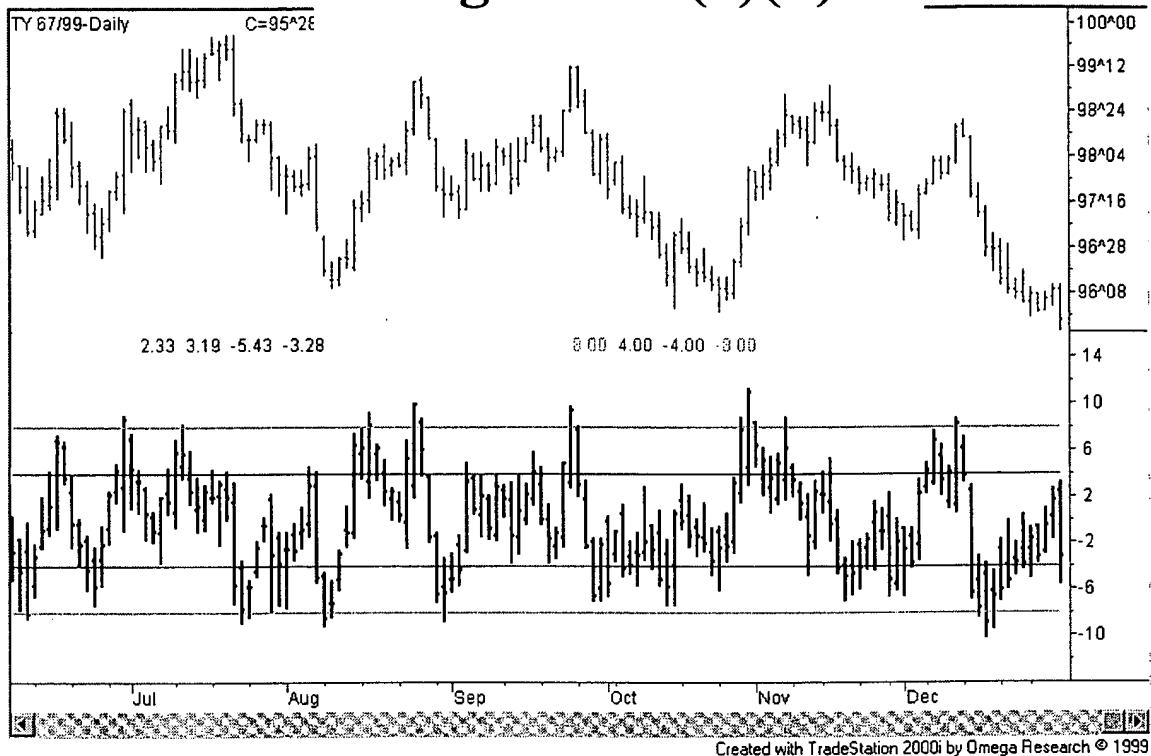


Figure 23a Daily Treasury Note price chart (above) and Value Chart™ (below).

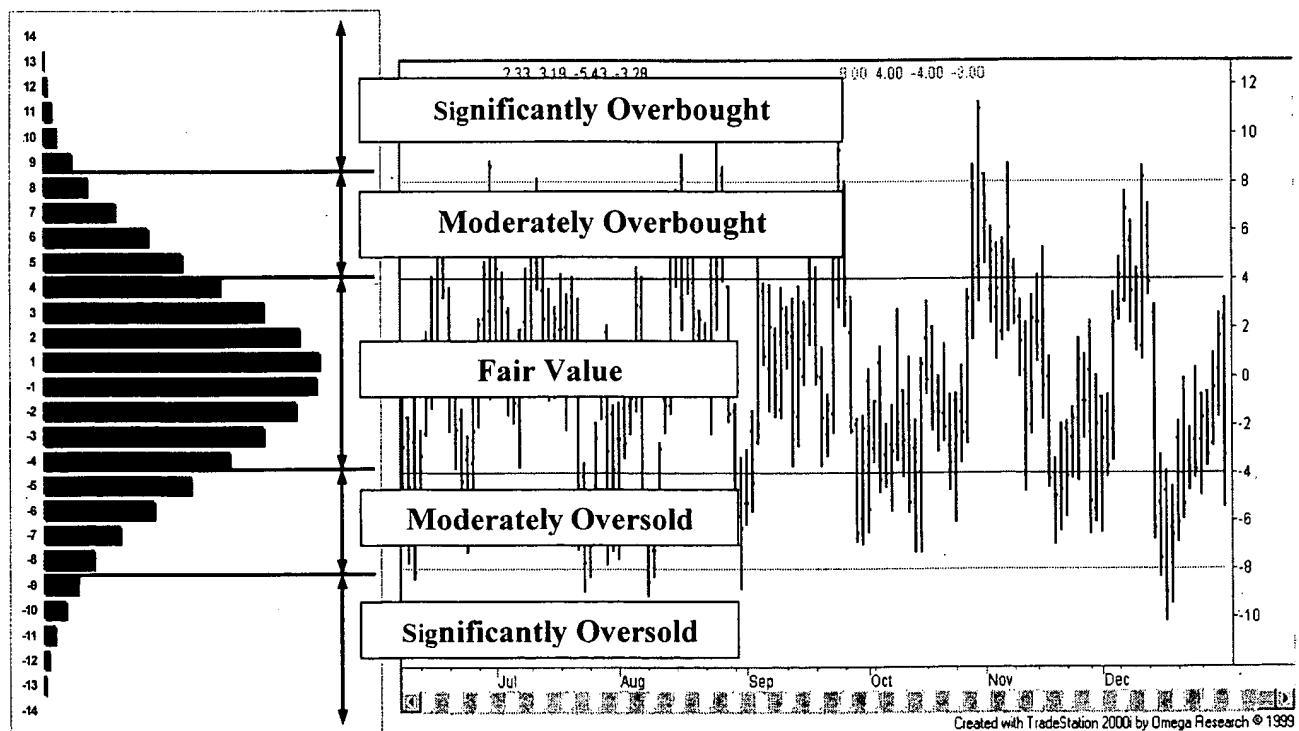


Figure 23b Valuation convention - Price Action Profile™ & Value Chart™.

Figure 24

	SP80	SP90
Over +12	0.0%	0.0%
Over +11	0.1%	0.1%
Over +10	0.3%	0.3%
Over +9	0.8%	0.8%
Over +8	1.8%	1.7%
Over +7	3.5%	3.6%
Over +6	6.5%	6.7%
Over +5	11.0%	11.5%
-8 to +8	96.8%	96.8%
-7 to +7	93.7%	93.6%
-6 to +6	88.5%	88.6%
-5 to +5	80.5%	80.8%
-4 to +4	69.5%	69.8%
-3 to +3	55.1%	55.6%
-2 to +2	38.2%	38.8%
-1 to +1	19.5%	19.8%
Under -5	8.6%	7.6%
Under -6	5.0%	4.7%
Under -7	2.7%	2.7%
Under -8	1.4%	1.5%
Under -9	0.7%	0.7%
Under -10	0.4%	0.3%
Under -11	0.2%	0.1%
Under -12	0.2%	0.1%

Figure 24 Price Action Profile™ analysis comparison - S&P 500 (1980s vs. 1990s).

Figure 25



Figure 25 Monthly price chart of Cocoa (box encloses the 1970s).

Figure 26

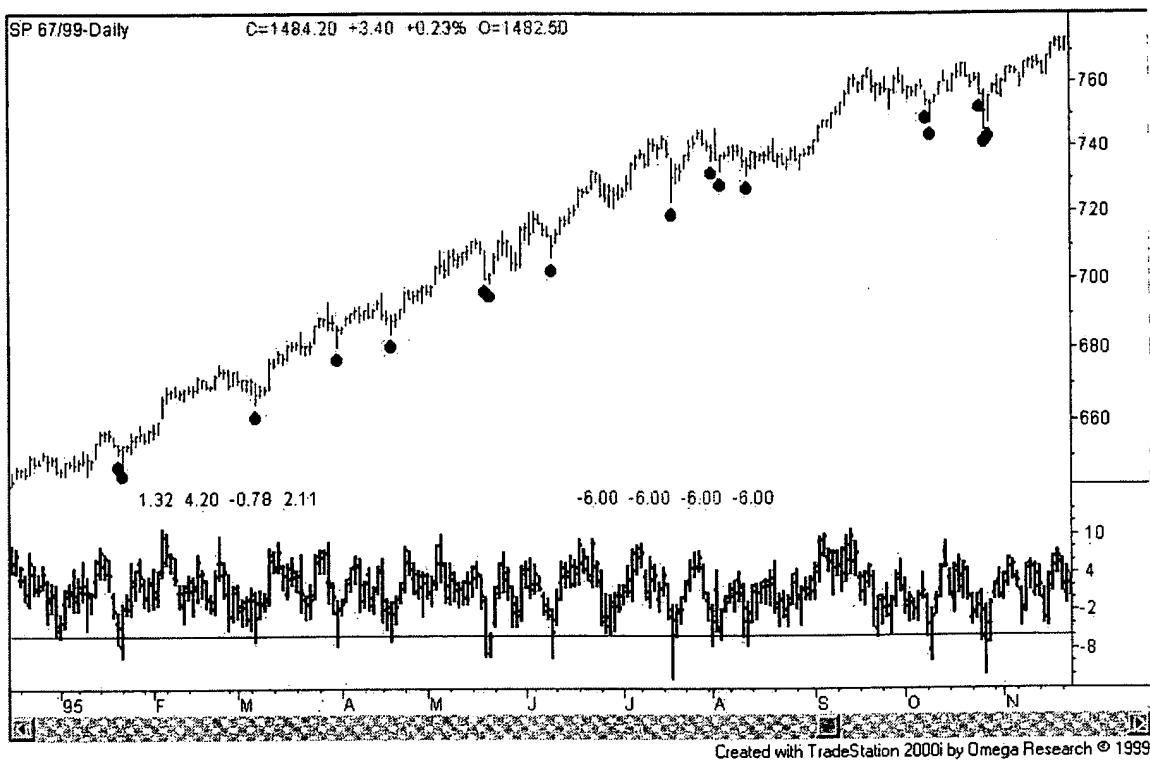


Figure 26 Buy points (identified by Value Charts™) with low risk exposure.

Figure 27

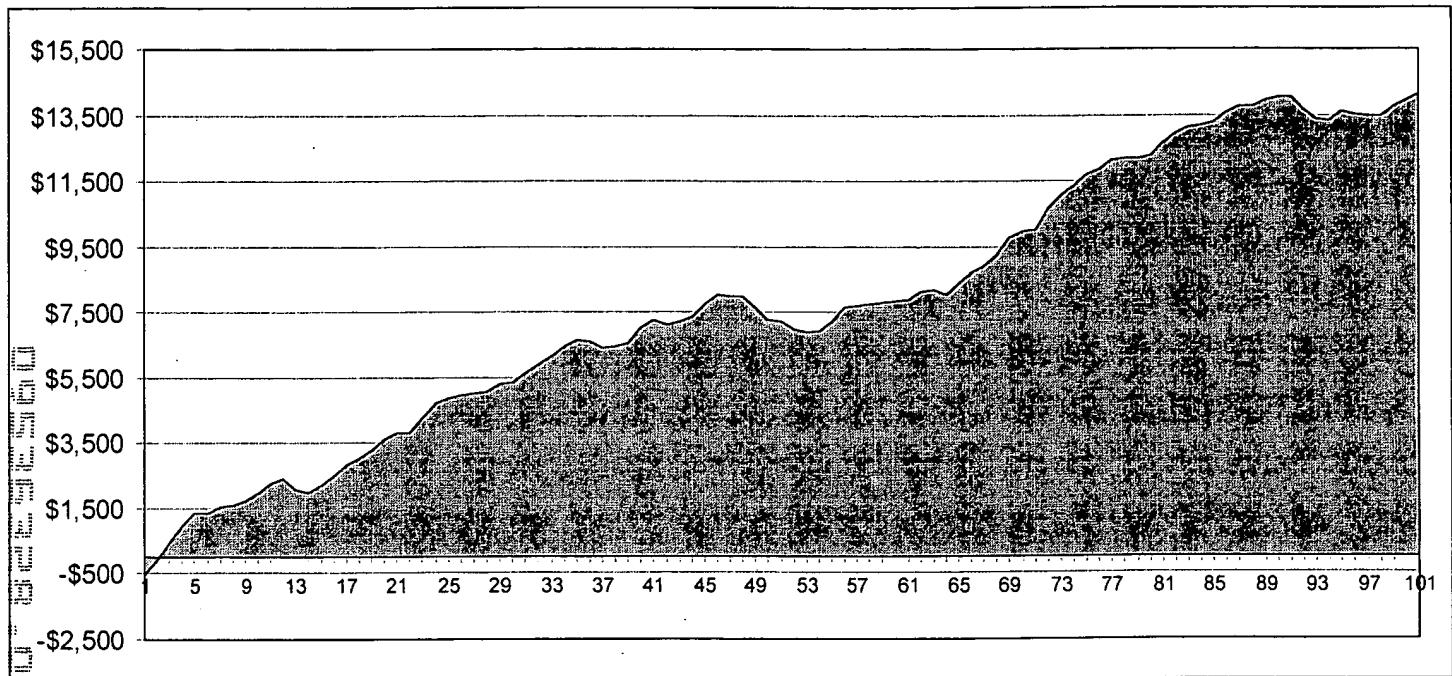


Figure 27 Average worst exposure profitably graph from buy points in figure 26 .
(x-axis represents days following average market entry)

Figure 28

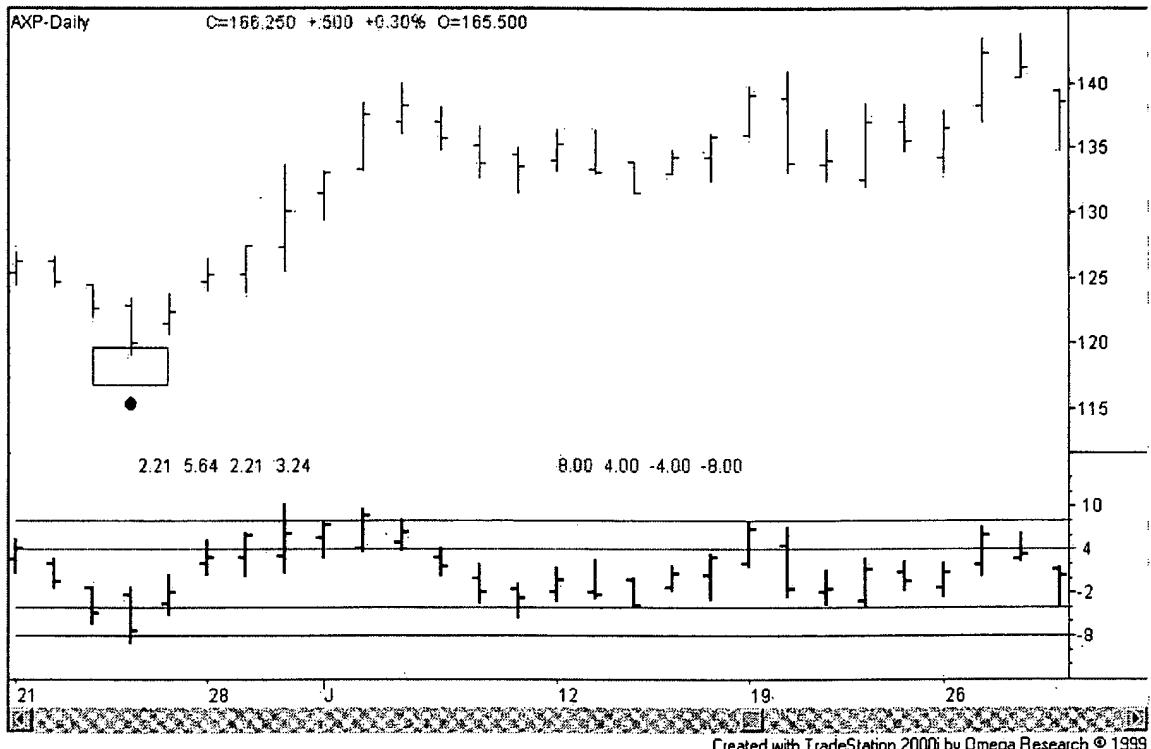


Figure 28 Low risk exposure buying point on daily American Express price chart.

Figures 29(a)(b)

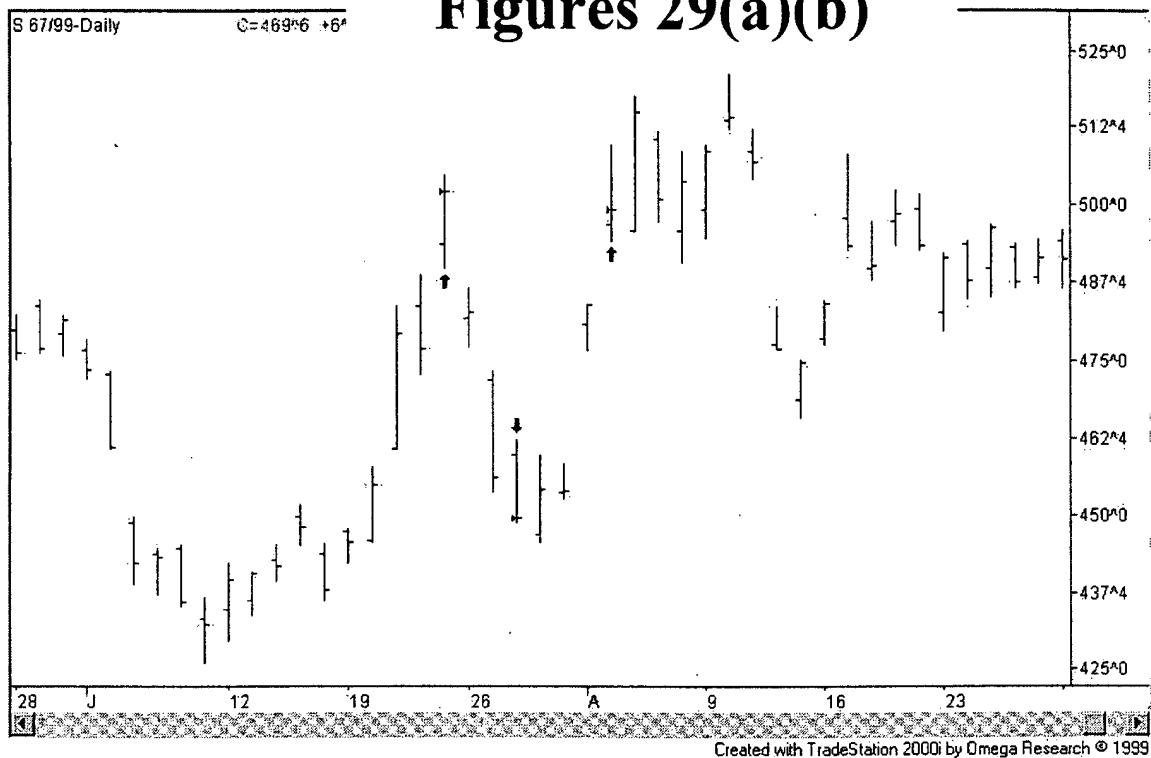


Figure 29a Trend-following system whipsawed in Soybeans.

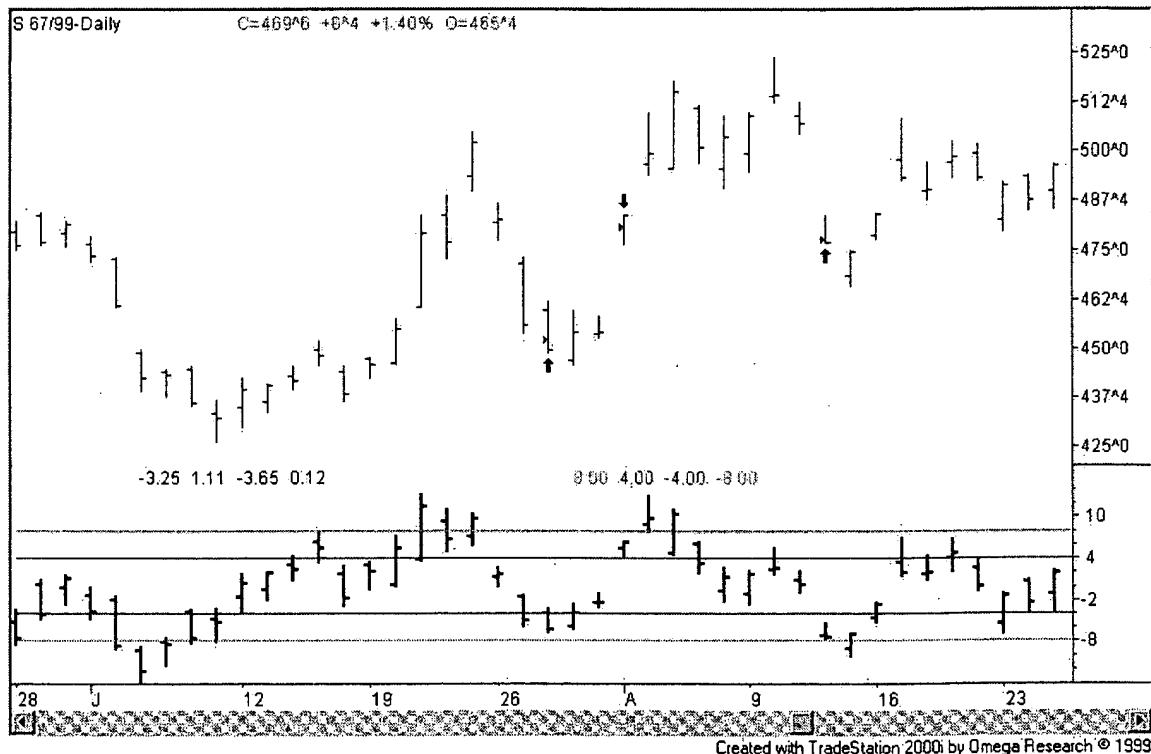


Figure 29b Value Charts™ can improve fill prices in choppy markets.

Figure 30

Trend-Following System (Figure 29a)			Value Chart Price	Price Action Profile
Date	Trade	Price	Price Level	Analysis
23-Jul-99	Buy	502.25	+9.61	1.37% of the time
28-Jul-99	Sell	449.5	-6.51	6.78% of the time
3-Aug-99	Buy	499.25	+9.56	1.37% of the time

Trend-Following System Enhanced by Value Charts (Figure 29b)			Value Chart Price	Price Improvement
Date	Trade	Price	Price Level	Per Contract (\$)
28-Jul-99	Buy	451.5	-6	\$ 2,537.50
2-Aug-99	Sell	483.25	+6	\$ 1,687.50
12-Aug-99	Buy	481.75	-6	\$ 875.00

Dollars Saved Per Contract From Value Chart Enhancements \$ 5,100.00

Figure 30 Profits from Value Chart™ enhancements for whipsaw trades (figure 29a,b).

Figure 31

- 1) Bar located above sector:
- 2) Bar located below sector:
- 3) Bar passes all of the way through sector:
- 4) Entire bar is inside of sector:
- 5) High of bar is in sector and low of bar is below sector:
- 6) Low of bar is in sector and high of bar is above sector:

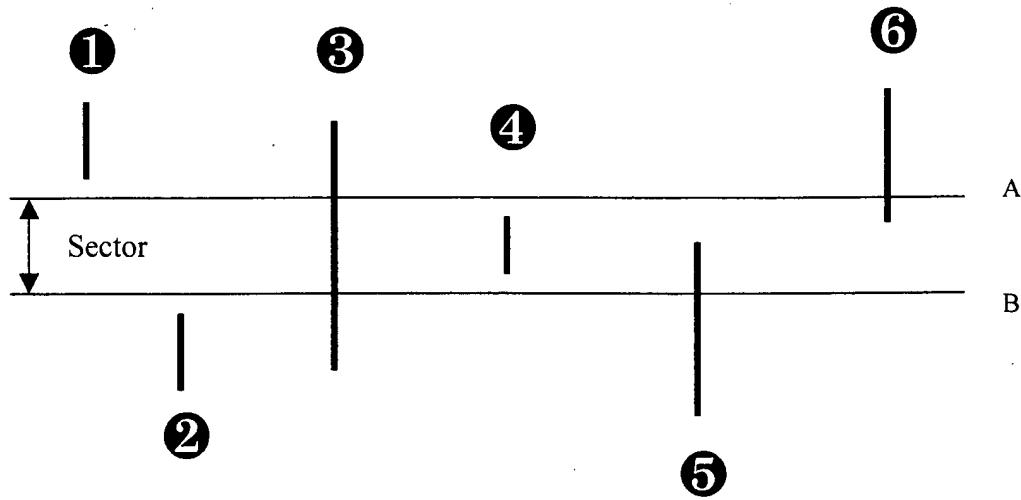


Figure 31 Six different ways a price bar can trade relative to a Value ChartTM interval.

Figure 32

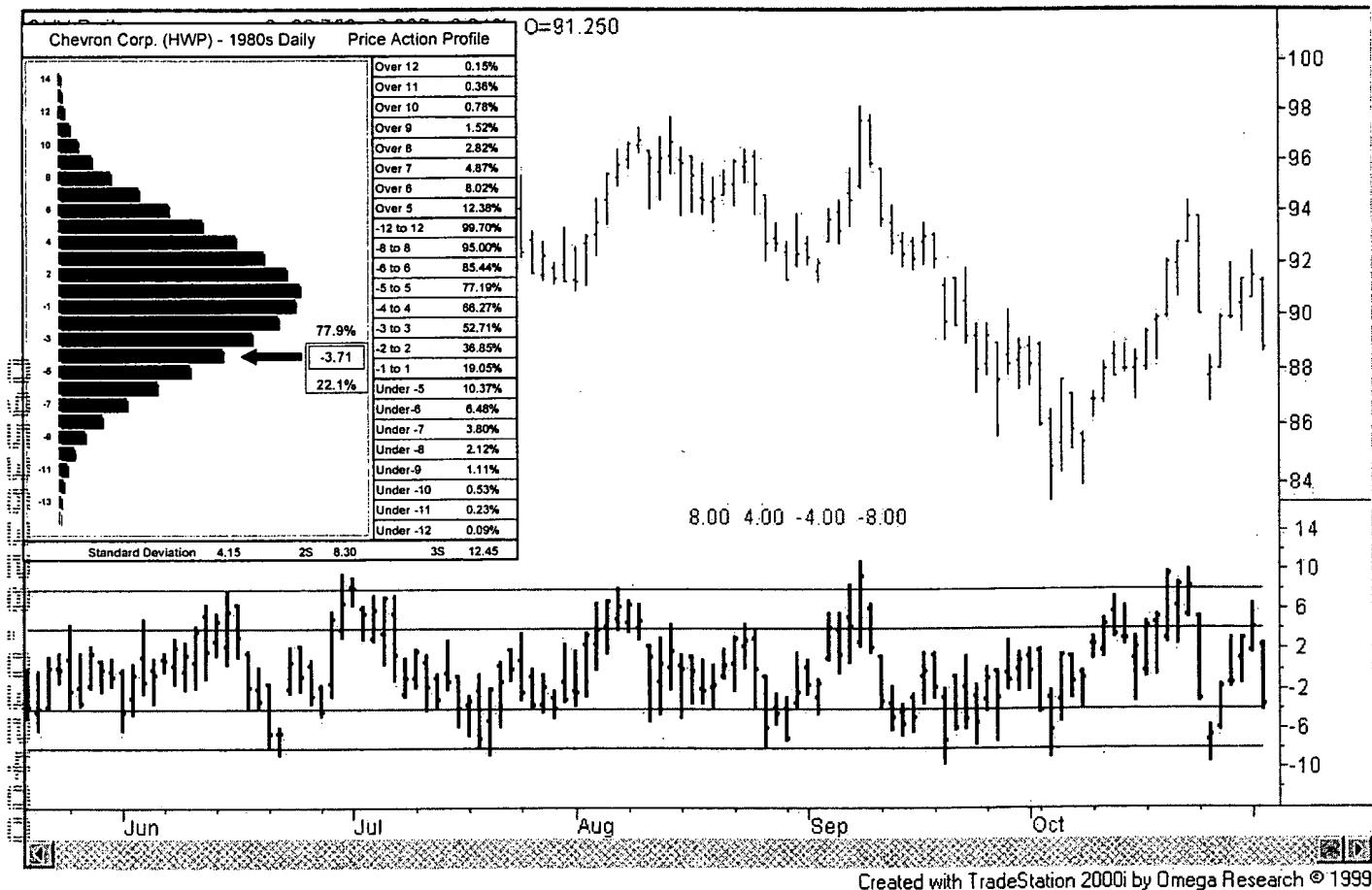


Figure 32 Example trading screen of the Value Charts™ and Price Action Profile™ concept applied to a daily chart of Chevron Corp.

Figure 33

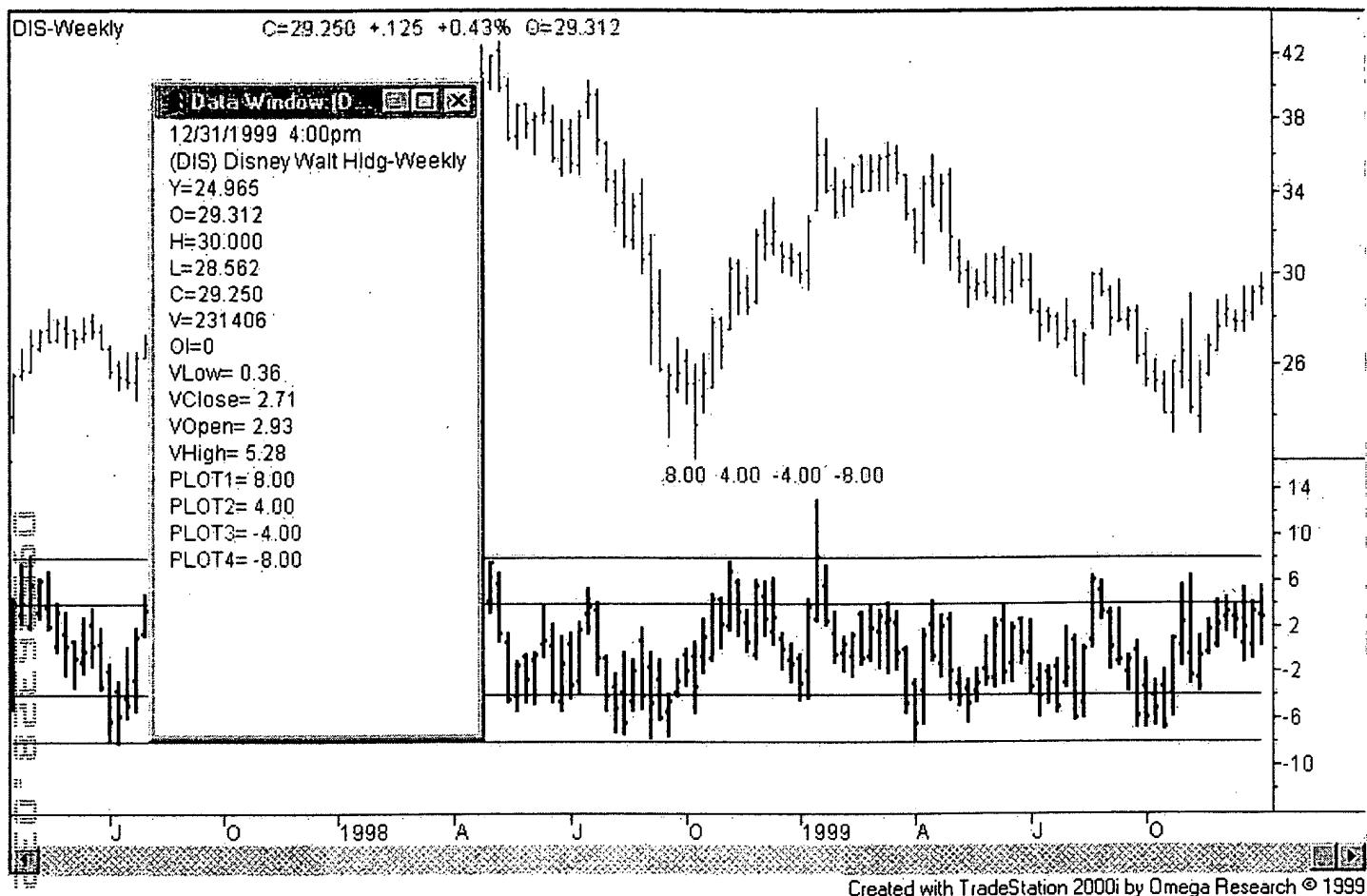


Figure 33 Example trading screen of the Value Charts™ concept applied to a weekly chart of Walt Disney Corp (data window is displayed).

Figure 34

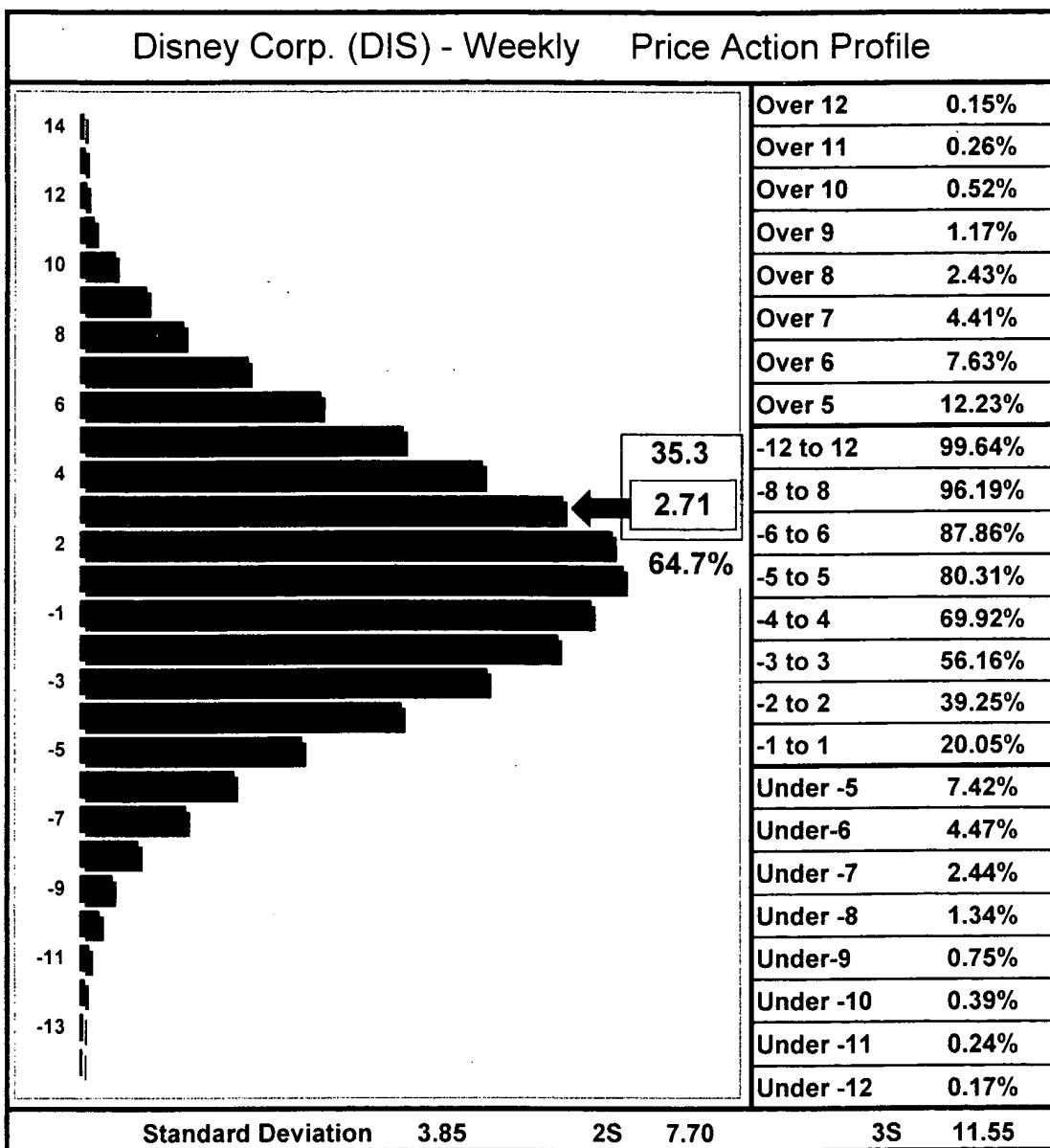


Figure 34 Example trading screen of the Price Action Profile™ concept applied to a weekly chart of Walt Disney Corp (displayed in figure 33).

Figure 35

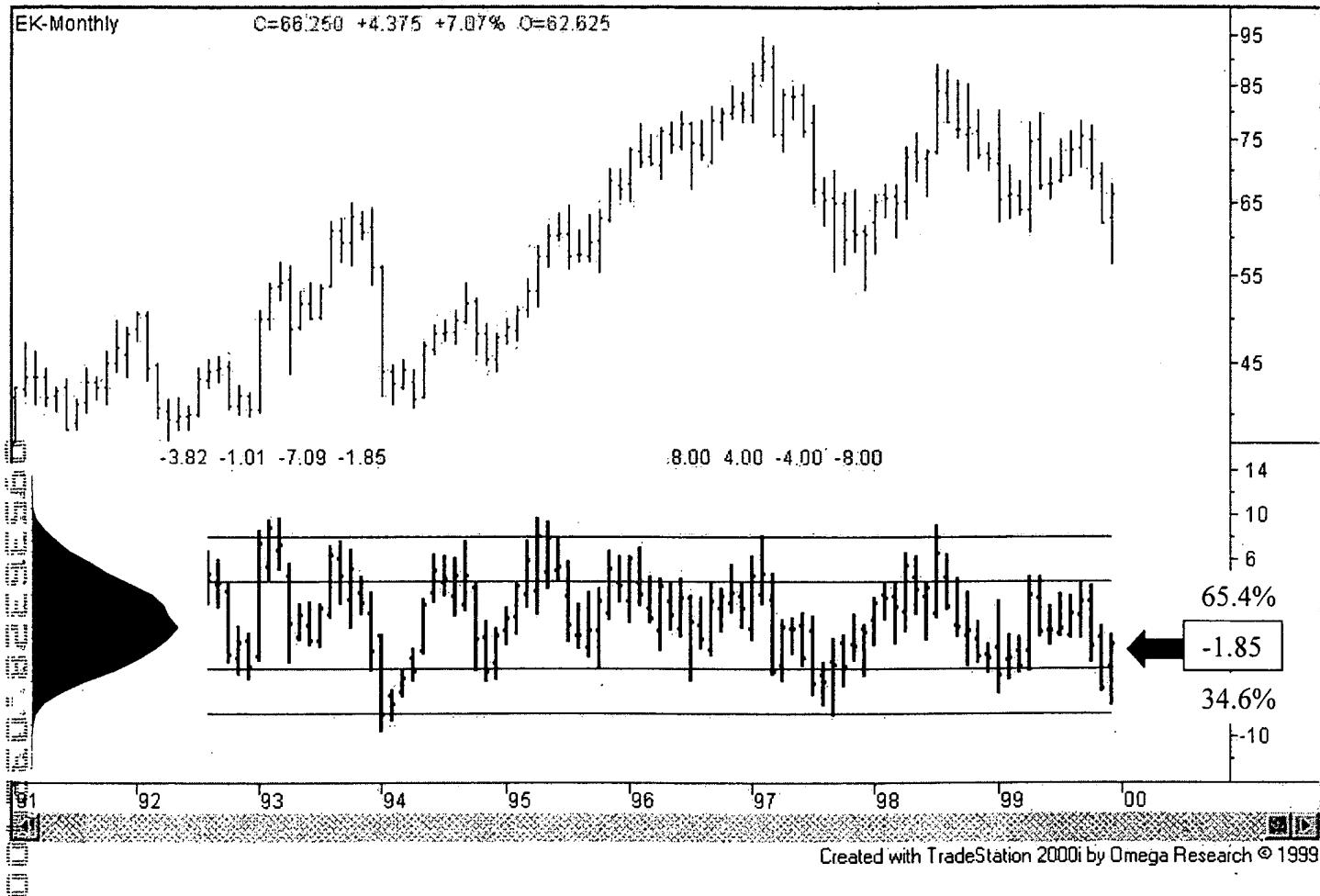


Figure 35 Example trading screen of the Value Chart™ and Price Action Profile™ concept applied to a monthly chart of Eastman Kodak.

Figure 36

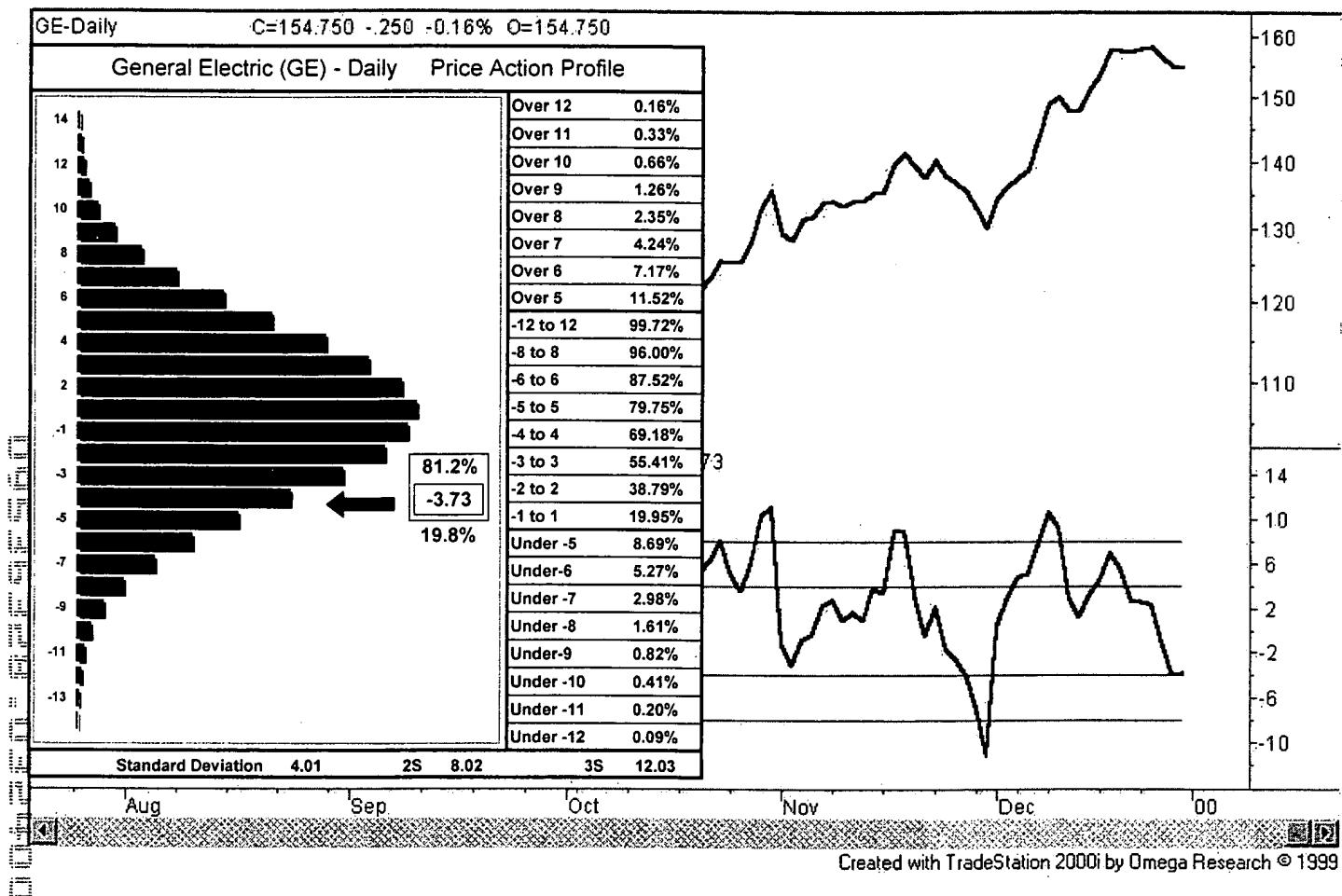


Figure 36 Example trading screen of the closing price and the Value Chart™ close and Price Action Profile™ (line) concept applied to a daily chart of General Electric.

Figure 37

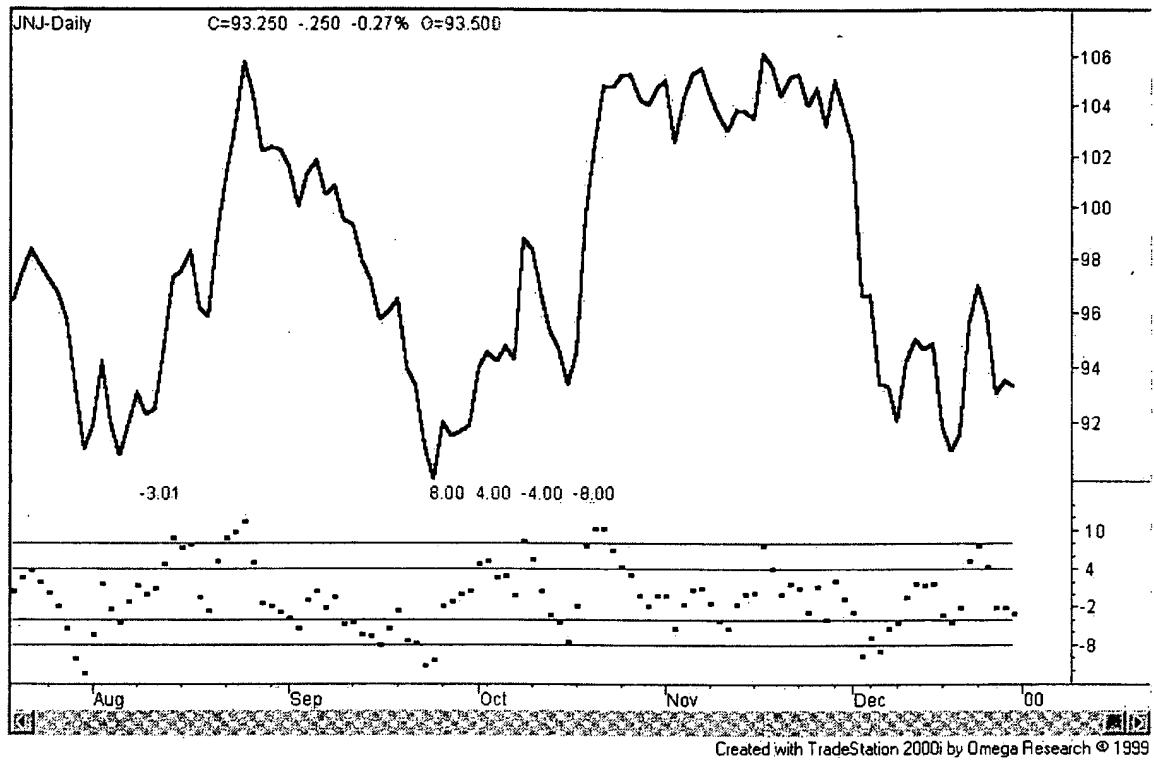


Figure 37 Example trading screen of the closing price and the Value Chart™ close concept applied to a daily chart of Johnson & Johnson.

Figures 38(a)(b)

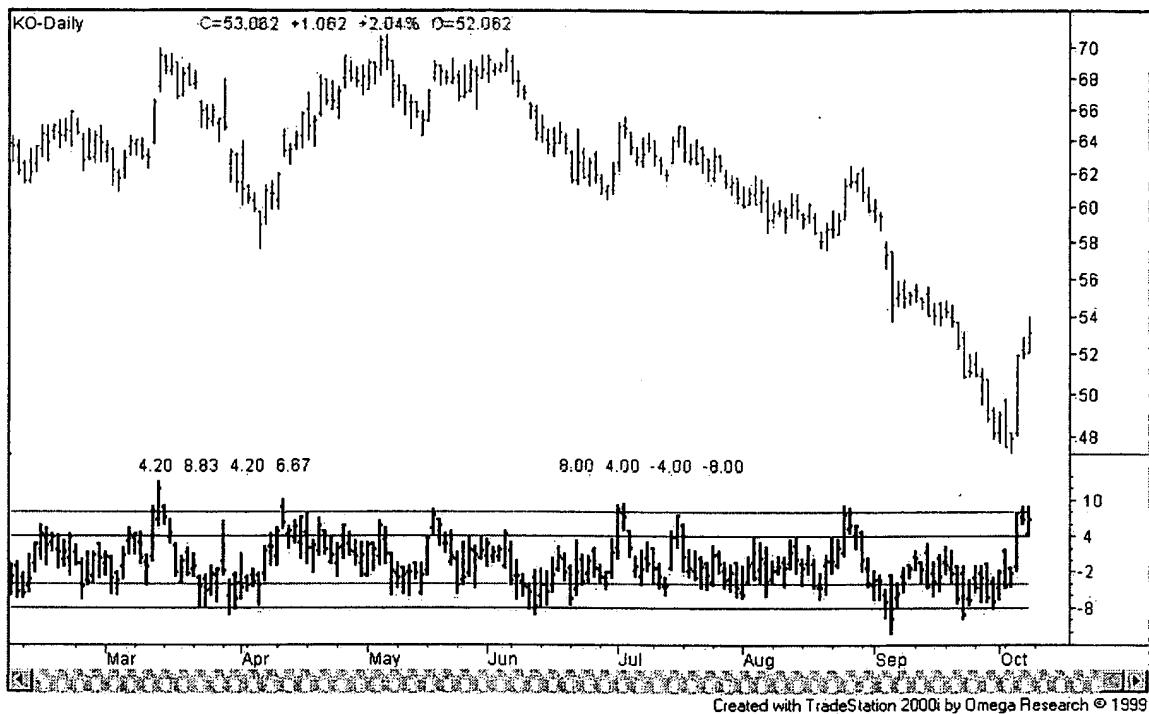


Figure 38a Daily Coca Cola with Value Chart™.

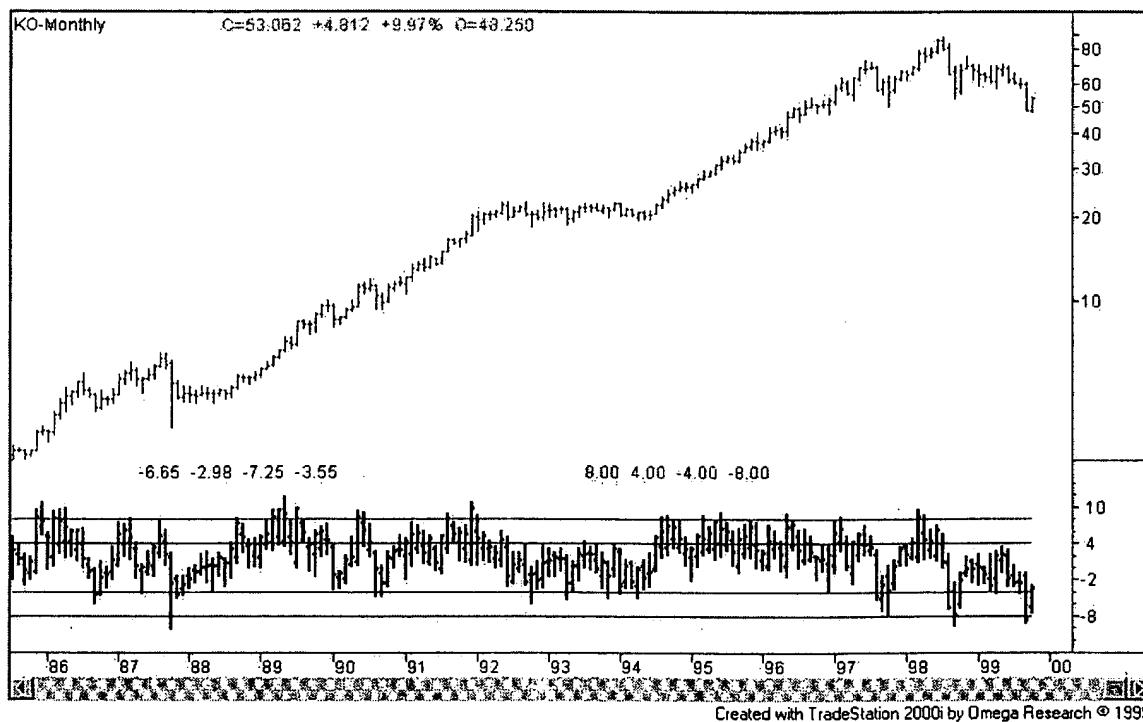


Figure 38b Monthly Coca Cola with Value Chart™.

Figure 39

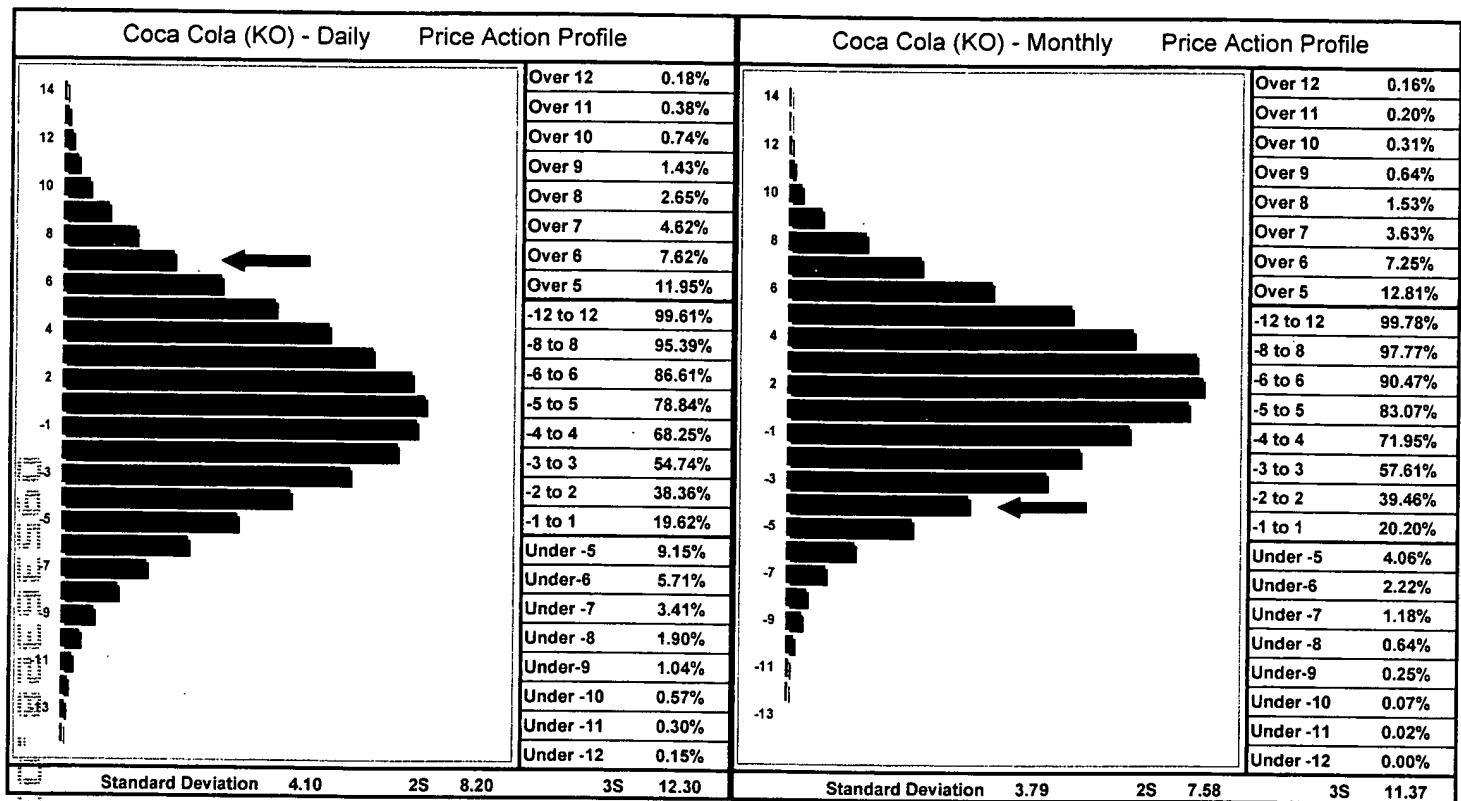


Figure 39 Price Action Profiles™ of Daily and Monthly Coca Cola Value Charts™ through October 8, 1999.

Figure 40

May-2000 Crude Oil (Time Spectrum Relative Valuation Grid)

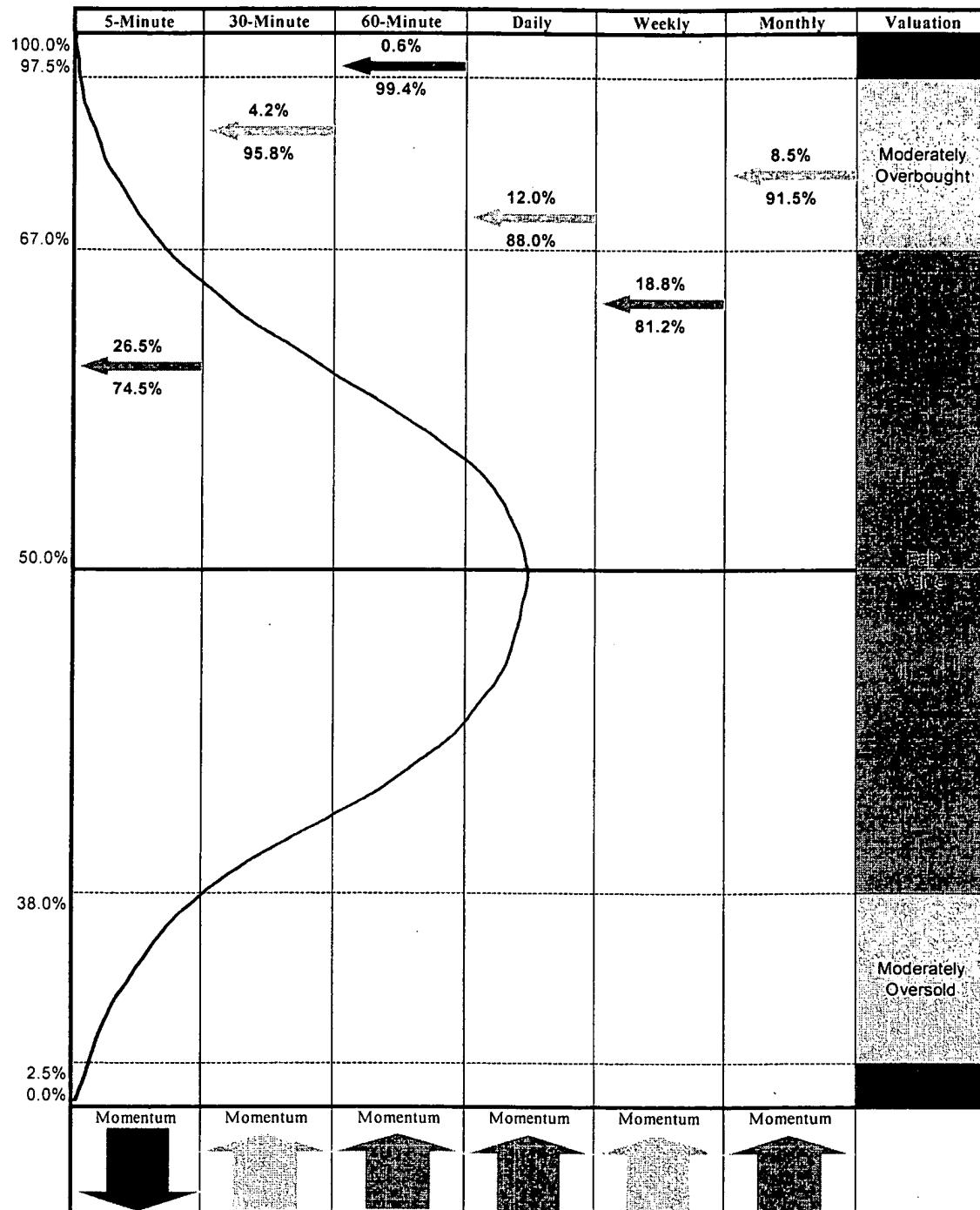


Figure 40 Price Action Profile™ analysis from different timeframes in Crude Oil.

Figure 41

May-2000 Crude Oil (Time Spectrum Relative Valuation Grid)

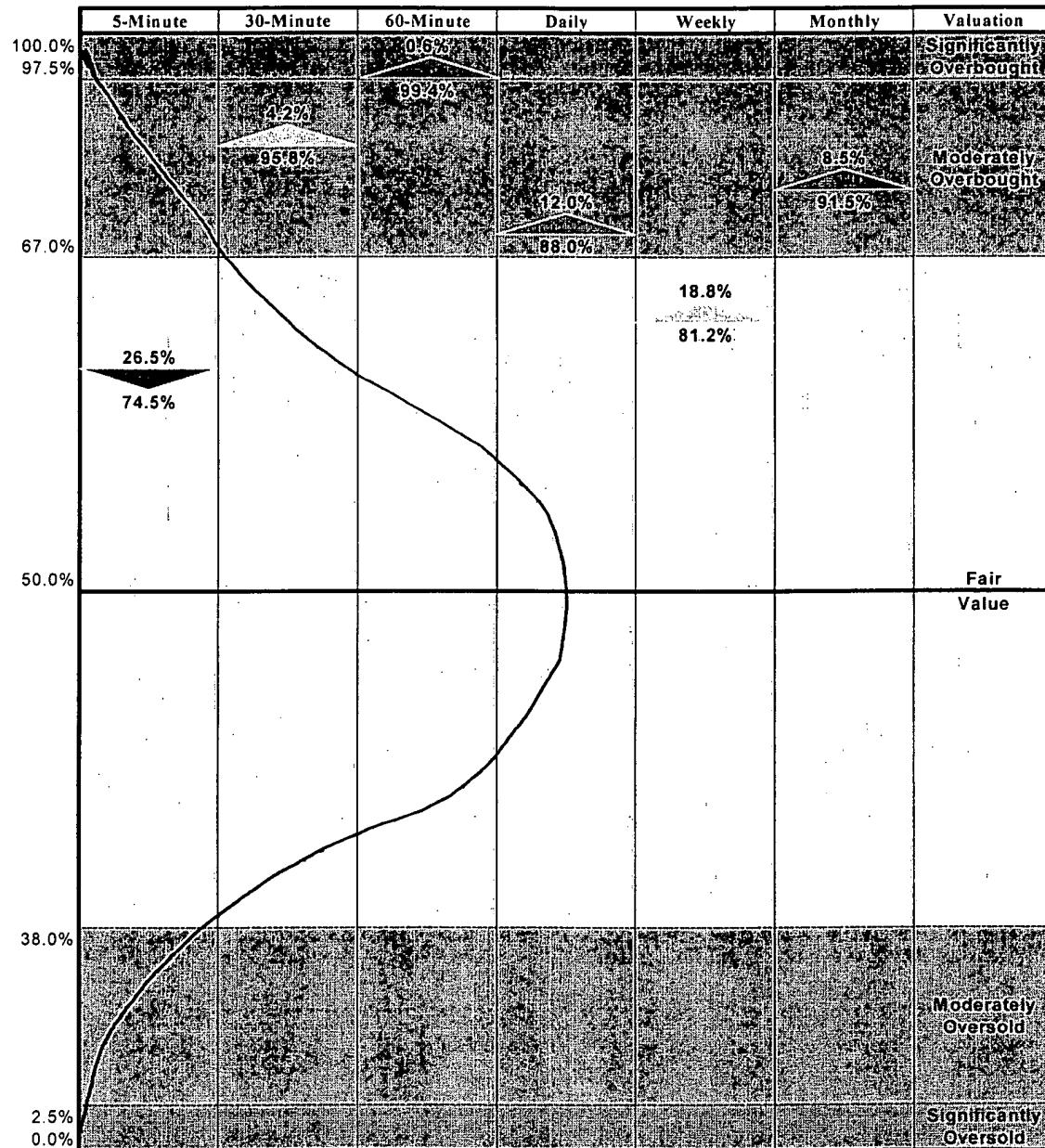


Figure 41 Price Action Profile™ analysis from different timeframes in Crude Oil with momentum arrow indicators.

Figure 42

Market Spectrum Relative Valuation Grid

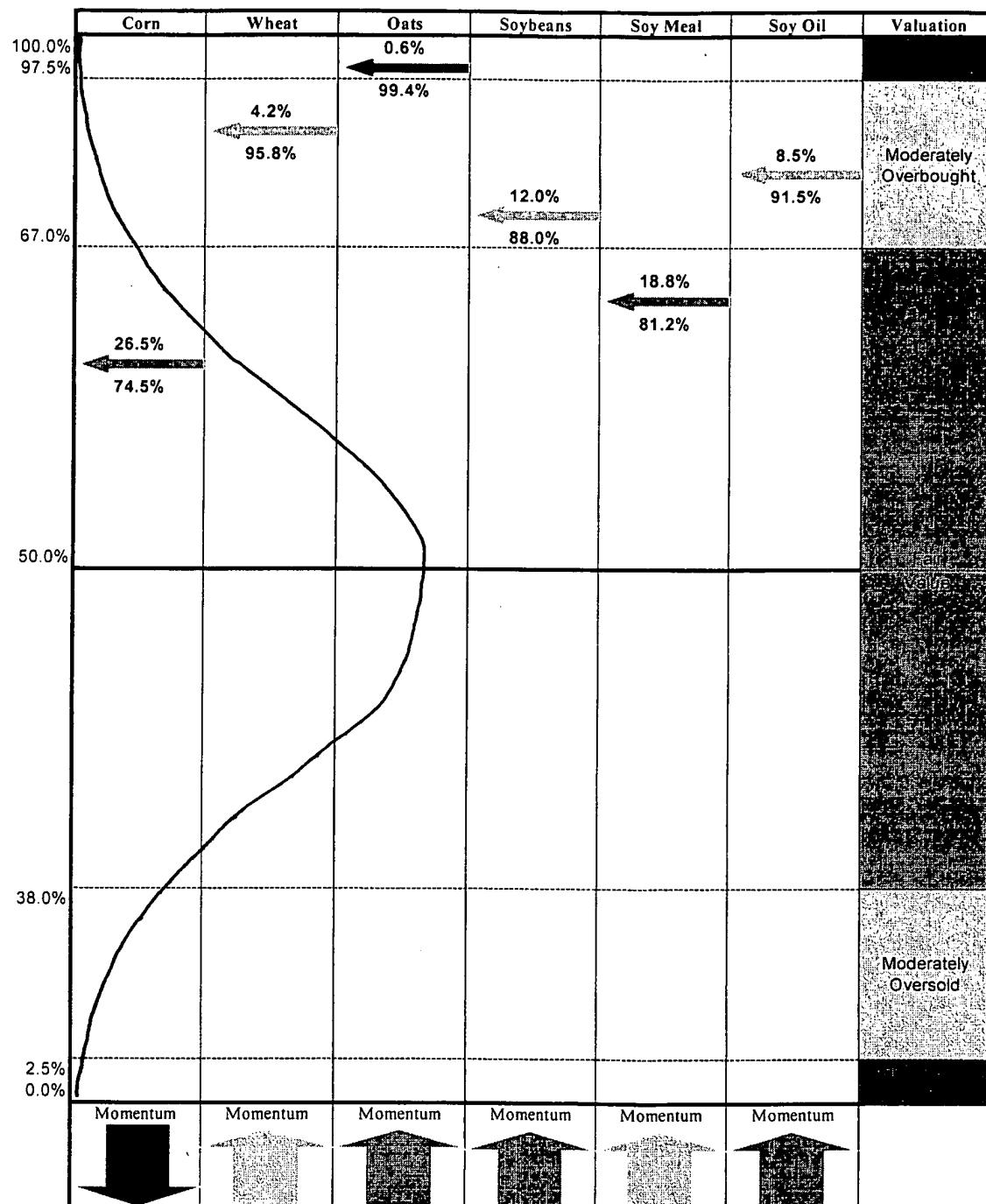


Figure 42 Price Action Profile™ analysis from different markets with momentum arrow indicators.

Figure 43

Daily Market Spectrum Relative Valuation Grid

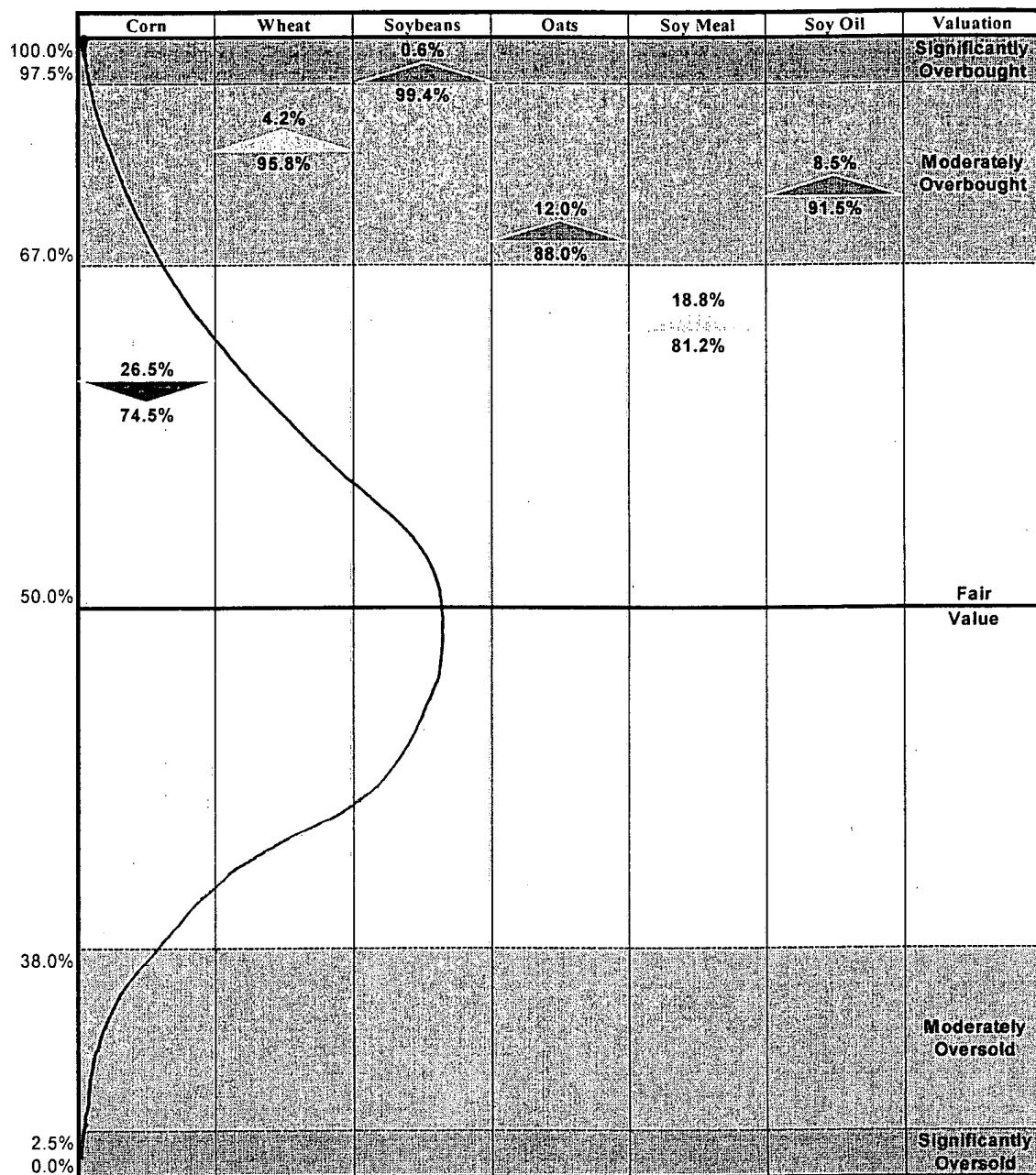


Figure 43 Price Action Profile™ analysis from different markets with momentum arrow indicators.

Figure 44

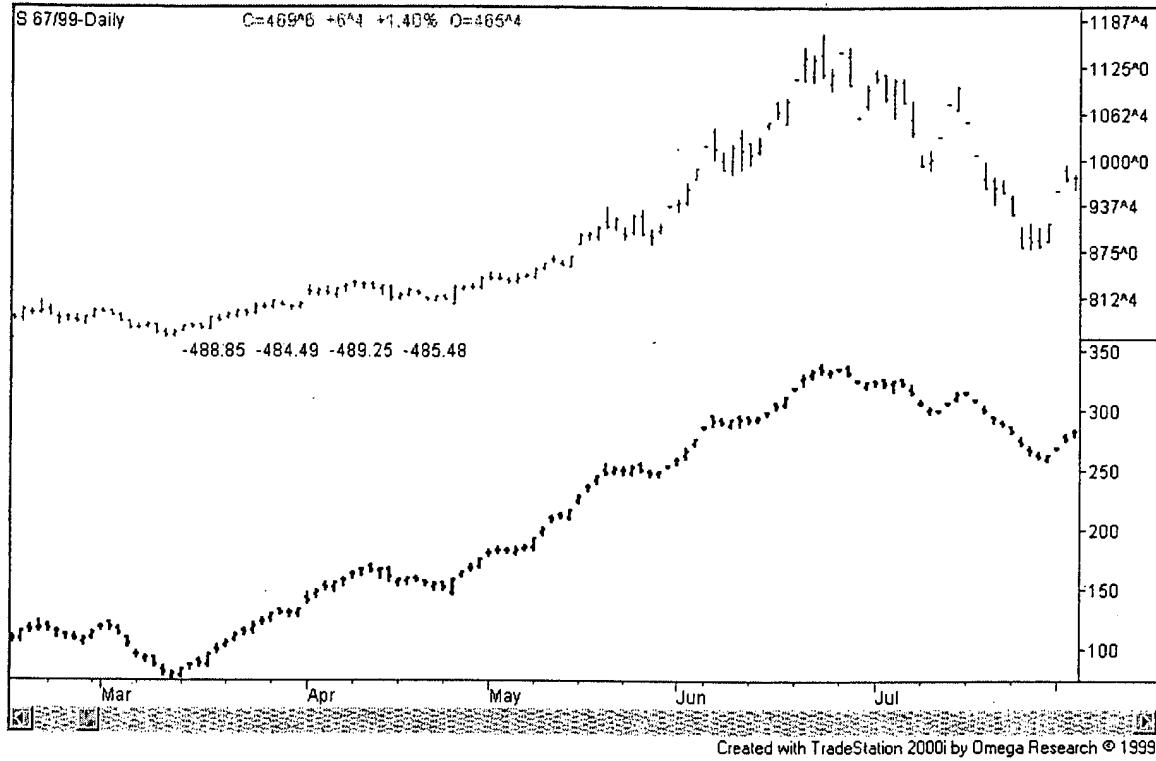


Figure 44 Value Chart™ transposed into a absolute chart (bottom).

Using the Value Chart™ formulas, a volatility adjusted absolute chart can be generated by simply adding the Value Chart™ open, high, low, and close prices to the previous Value Chart™ close. In other words, instead of plotting Value Chart prices with respect to the floating axis, this new volatility adjusted absolute chart (bottom of figure 44) adds the next price bar (price) to the previous bars close.